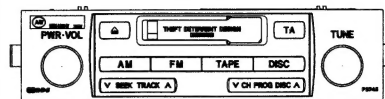


Pioneer *sound.vision.soul*

Service Manual

TOYOTA



KEX-M8547ZT/EW

ORDER NO.
CRT3321

RECEIVER ASSY, RADIO

KEX-M8547ZT_{/EW}

KEX-M8547ZT-91_{/EW}

KEX-M8647ZT_{/EW}

KEX-M8647ZT-91_{/EW}

VEHICLE	DESTINATION	PRODUCED AFTER	OEM PARTS No.	ID No.	PIONEER MODEL No.
LAND CRUISER PRADO	EUROPE	August 2004	86120-60461	P3745	KEX-M8547ZT/EW
LAND CRUISER PRADO	EUROPE	August 2004	86120-60461	P3745	KEX-M8547ZT-91/EW
LAND CRUISER PRADO	EUROPE	August 2004	86120-60451	P3746	KEX-M8647ZT/EW
LAND CRUISER PRADO	EUROPE	August 2004	86120-60451	P3746	KEX-M8647ZT-91/EW



For details, refer to "Important symbols for good services".

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936
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K-ZZA. JULY 2004

This service manual should be used together with the following manual(s):

Model No.	Order No.	Mech.Module	Remarks
CX-1011	CRT2406	3L	Cassette Mech. Module : Mech. Description, Disassembly

A

**Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.**

**This service manual does not describe the CD test mode.
For the operations in the CD test mode, refer to the CD player's service manual.**

● Supplementary model is identical to the original except for the addition of following items.

* : Non spare part

B

Description	KEX-M8547ZT-91/EW KEX-M8647ZT-91/EW
Polyethylene Bag	CEG1026
Cover	CEG1045(x2)
Carton	CHG4857
Contain Box	CHL4857(x1/4)
* Air Cap	CHW1947

C

D

E

F

5 6 7 8

SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

● Service Precaution

1. You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.
2. When you exchange the CN473 (mentioned P.6 PART No.11) for new part. Cut all terminals about 0.5mm to 1mm. (There is some possibility to touch the terminal with under chassis because of long terminals.)

[Important symbols for good services]

In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely. When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety



You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments



To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning



For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws



To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts



Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount. For replacement parts or tools, the prescribed ones should be used.

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1. SPECIFICATIONS

General

Power source13.2V(10.5V - 16.0V allowable)
Backup current. Less than 0.3 mA
Grounding system Negative type
Weight 1.18 kg

Tape player

Tape Compact cassette tape (C-30 - C-90)
Tape speed . . 4.76 cm/sec.(+0.14 cm/sec.,-0.05 cm/sec.)
Wow & flutter. Less than 0.2 %(WRMS)
Fast forward/rewind time. . . . Less than 120 sec. for C-60
Stereo separation More than 30 dB
Signal-to-noise ratio More than 40 dB

FM tuner

Frequency range. 87.5 - 108.0 MHz
Usable sensitivity Less than 14 dBμV (S/N: 30 dB)
Signal-to-noise ratio More than 46 dB(54dBμ input)
Distortion Less than 1.5%
Digital noise Less than 25 mVp-p (74 dBμ input)

MW tuner

Frequency range. 522 - 1,611 kHz
Usable sensitivity Less than 34 dBμV(S / N : 20 dB)
Selectivity More than 20 dB (±9 kHz)
Signal-to-noise ratio More than 42 dB (74 dBμ input)
Distortion Less than 1.5%

LW tuner

Frequency range. 153 - 279 kHz
Usable sensitivity Less than 40 dBμV(S / N : 20 dB)
Selectivity More than 20 dB (±9 kHz)
Signal-to-noise ratio More than 42 dB (74 dBμ input)
Distortion Less than 1.5%

1 ■ 2 ■ 3 ■ 4

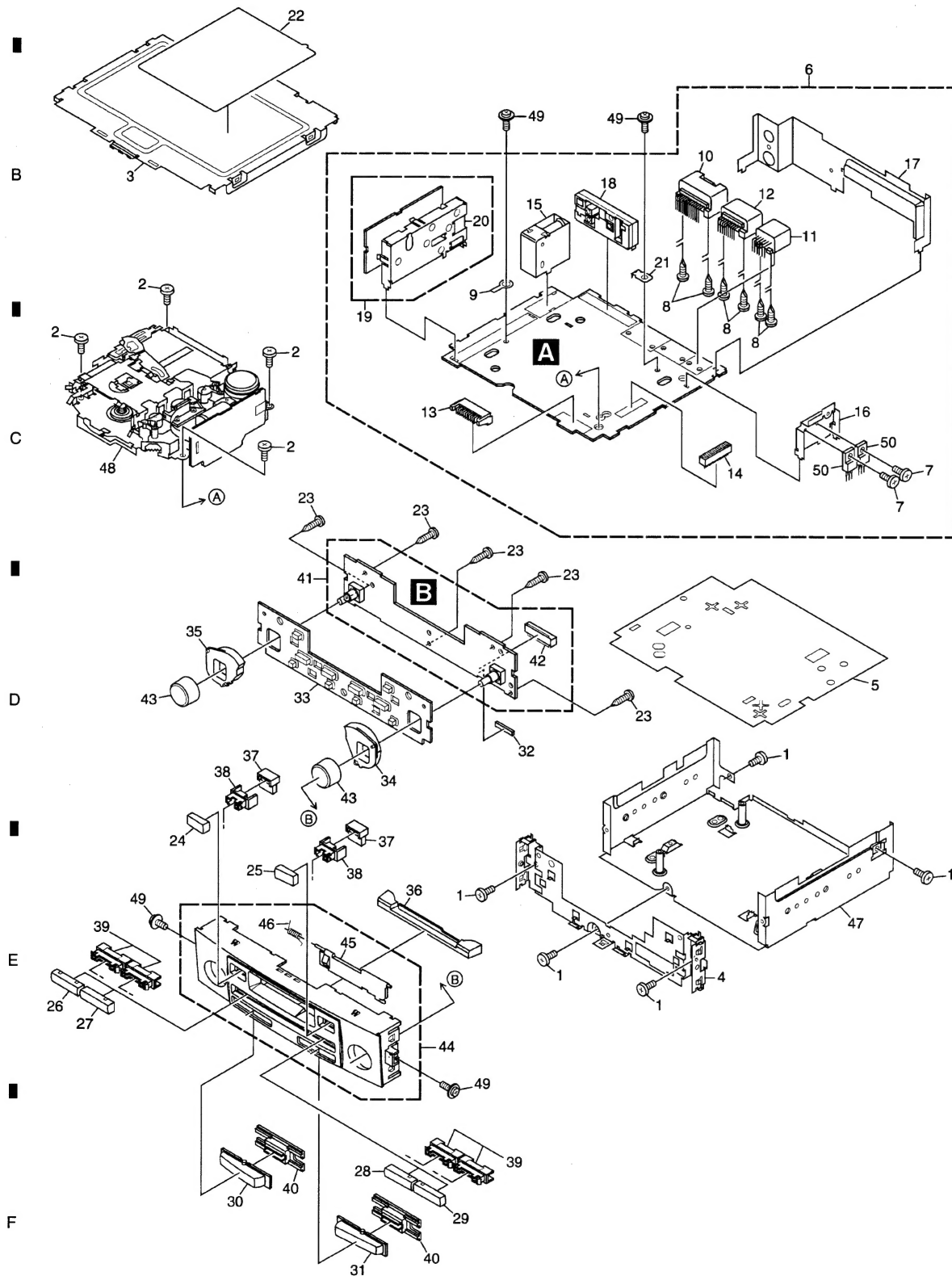
*NOTES : • Parts marked by " * " are generally unavailable because they are not in our Master Spare Parts List.*

- Screw adjacent to ∇ mark on the product are used for disassembly.

- *For the applying amount of lubricants or glue, follow the instructions in this manual.*

(In the case of no amount instructions, apply as you think it appropriate.)

2.1 EXTERIOR



Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	BMZ30P050FTC	26	Button	See Contrast table(2)
2	Screw	BSZ26P060FTC	27	Button	See Contrast table(2)
3	Upper Case	CNB3080	28	Button	See Contrast table(2)
4	Front Frame	CNC9684	29	Button	See Contrast table(2)
5	Insulator	CNM7528	30	Button	See Contrast table(2)
6	Main Unit	See Contrast table(2)	31	Button	See Contrast table(2)
7	Screw	BMZ30P060FTC	32	Cushion	CNM9194
8	Screw(M3x6)	CBA1393	33	Rubber	CNV6939
9	Terminal(CN502)	CKF1064	34	Lighting Conductor	CNV6942
10	Connector(CN801)	CKM1322	35	Lighting Conductor	CNV6943
11	Connector(CN473) *1	CKM1350	36	Lighting Conductor	CNV6944
12	Connector(CN472)	CKM1351	37	Lighting Conductor	CNV6948
13	Plug(CN804)	CKS3539	38	Holder	CNV6951
14	Connector(CN353)	CKS3568	39	Holder	CNV6952
15	Antenna Jack(CN501)	CKX1024	40	Holder	CNV6953
16	Holder	CNC9686	41	Keyboard Unit	See Contrast table(2)
17	Rear Frame	CND2155	42	Socket(CN901)	CKS3552
18	FM Tuner Unit	CWE1679	43	Knob Unit(TUNE)(PWR, VOL)	CXB7979
19	FM/AM Tuner Unit	CWE1773	44	Grille Unit	See Contrast table(2)
20	Holder	CNC8855	45	Door	CAT2293
21	Terminal(CN802)	VNF1084	46	Spring	CBH1371
22	Shield Unit	CXB9781	47	Chassis Unit	CXC3861
23	Screw	BPZ20P080FTC	48	Cassette Mechanism Module	EXK4290
24	Button	See Contrast table(2)	49	Screw	ISS26P055FTC
25	Button	See Contrast table(2)	50	Transistor(Q810, 811)	2SB1185

(2) CONTRAST TABLE

KEX-M8547ZT/EW and KEX-M8647ZT/EW are constructed the same except for the following:

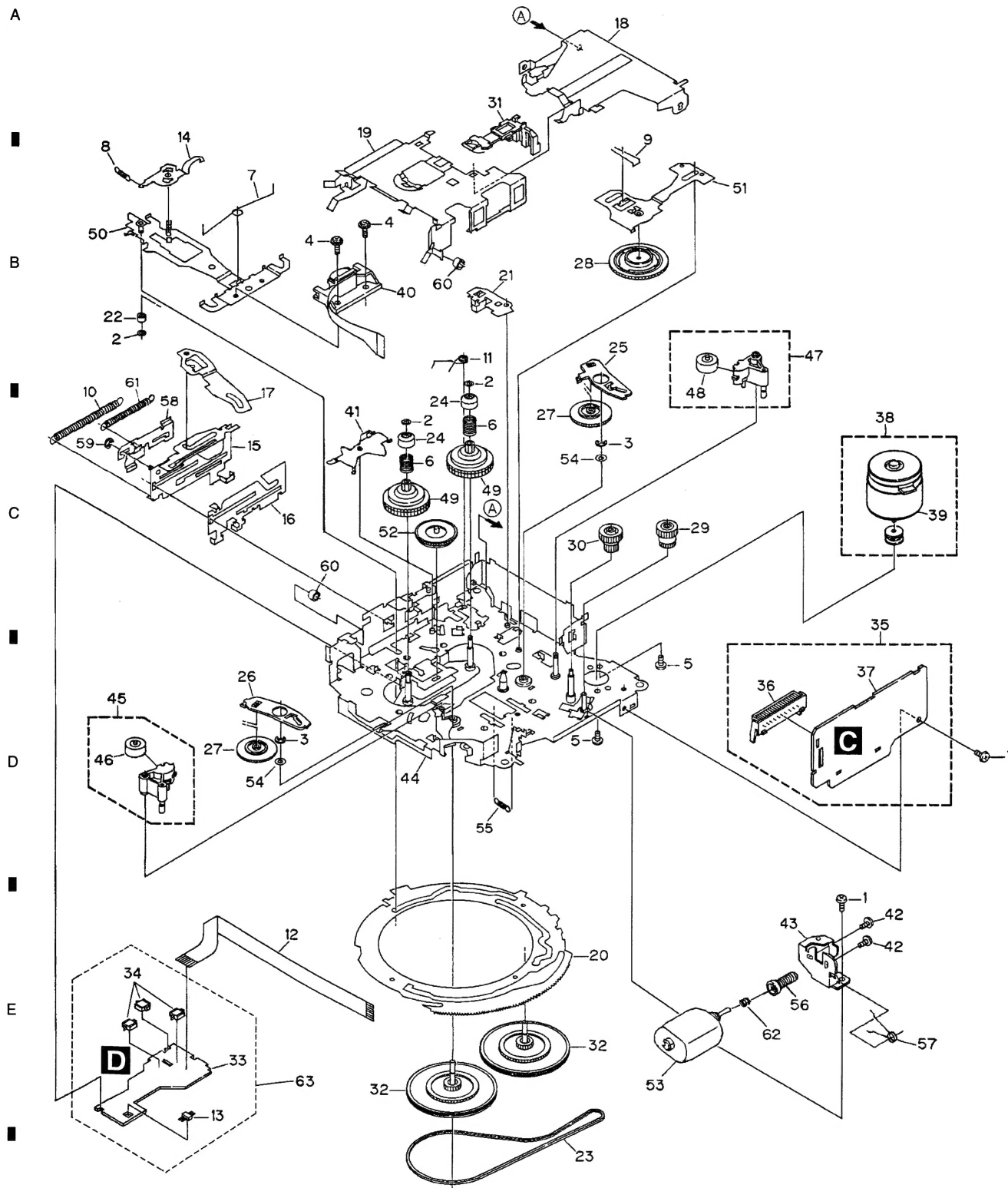
Mark	No.	Description	KEX-M8547ZT/EW	KEX-M8647ZT/EW
	6	Main Unit	CWM9554	CWM9555
	24	Button	CAC7276(TA)	CAC7277(CS-EJECT)
	25	Button	CAC7278(CS-EJECT)	CAC7279(TA)
	26	Button	CAC7280(DISC)	CAC7268(AM)
	27	Button	CAC7281(TAPE)	CAC7269(FM)
	28	Button	CAC7282(FM)	CAC7270(TAPE)
	29	Button	CAC7283(AM)	CAC7271(DISC)
	30	Button	CAC7284(CH, PROG, DISC)	CAC7272(SEEK, TRACK)
	31	Button	CAC7285(SEEK, TRACK)	CAC7273(CH, PROG, DISC)
	41	Keyboard Unit	CWS1338	CWS1339
	44	Grille Unit	CXC3340	CXC3341

*1 : The cautions in the case of exchanging parts (mentioned P.7 PART No.11) are indicated to P.3.

2.2 CASSETTE MECHANISM MODULE



For grease application, refer to the service manual for CX-1011 (CRT2406).

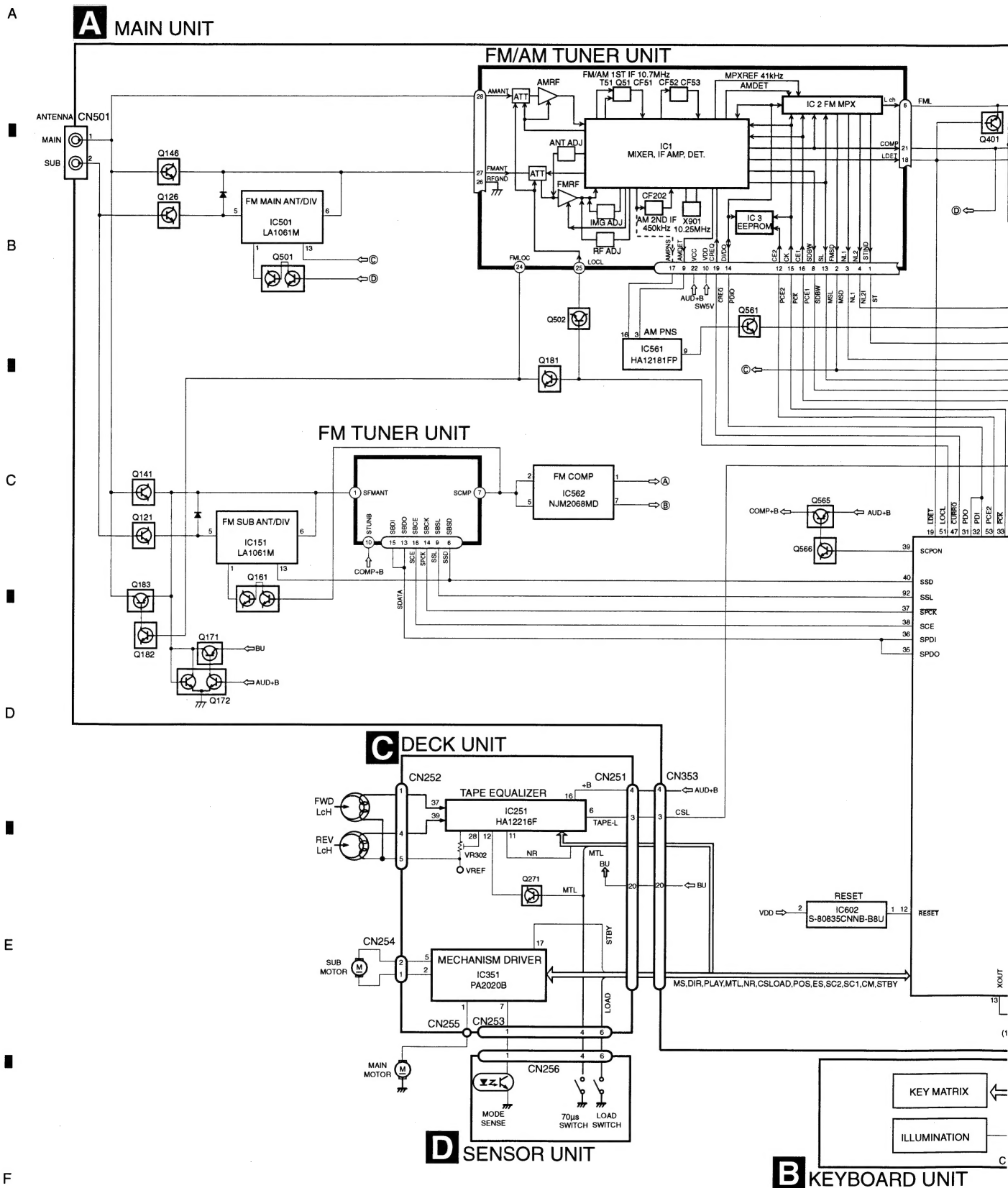


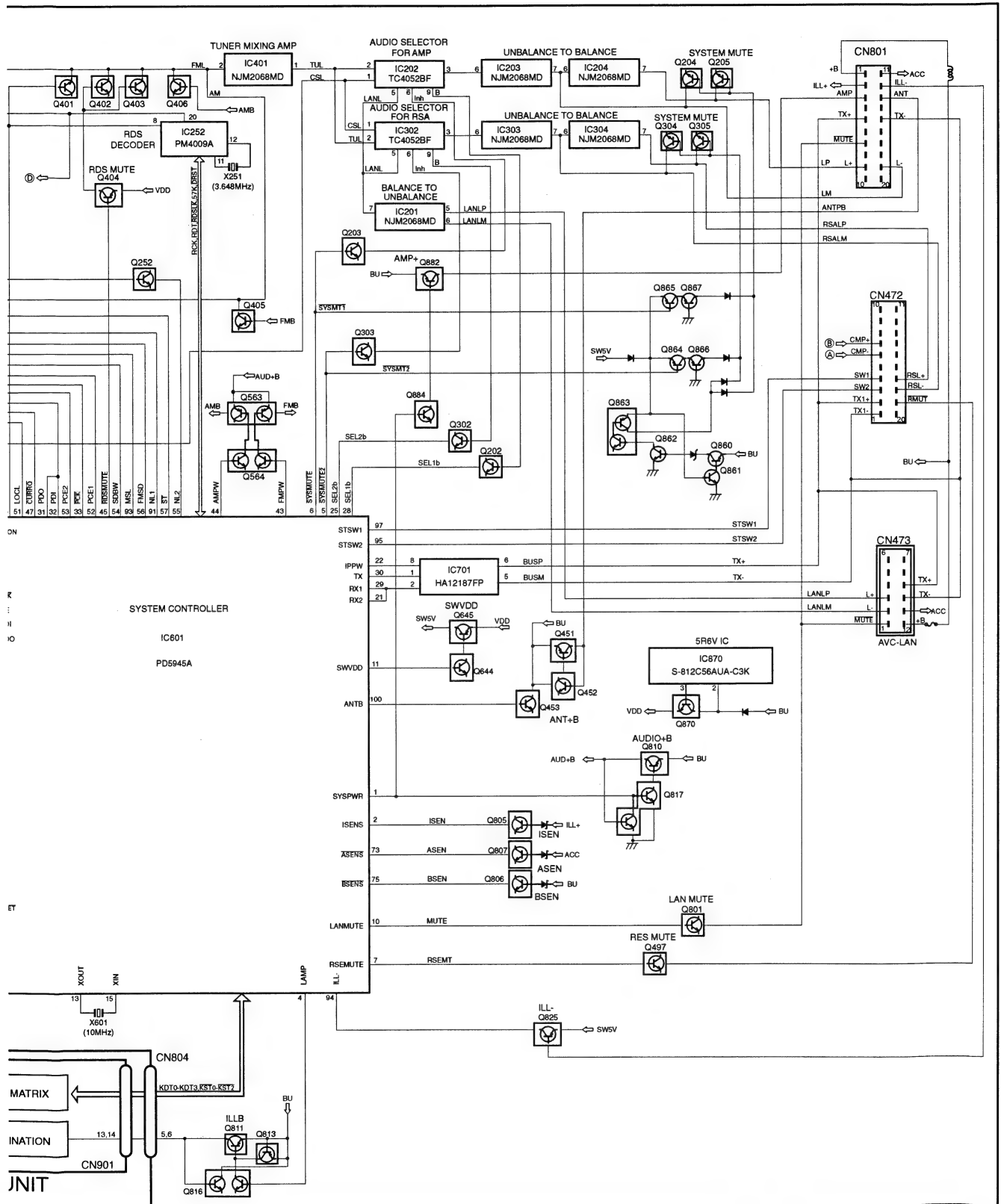
CASSETTE MECHANISM MODULE SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	BSZ20P040FTC	50	Head Base Unit	EXA1611
2	Washer	CBF1037			
3	Washer	CBG1003	51	Lever Unit	EXA1587
4	Screw	EBA1028	52	Gear Unit	EXA1596
5	Screw	BMZ20P022FTC	53	Motor Unit(M2)	EXA1660
			54	Washer	HBF-179
6	Spring	EBH1653	55	Spring	EBH1537
7	Spring	EBH1642			
8	Spring	EBH1641	56	Worm Gear	ENV1564
9	Spring	EBH1626	57	Spring	EBH1672
10	Spring	EBH1627	58	Lever	ENC1548
			59	Washer	YE15FTC
11	Spring	EBH1648	60	Tube	ENM1039
12	Cord	EDD1024			
13	Photo-reflector(Q101)	EGN1004	61	Spring	EBH1645
14	Arm	ENC1526	62	Spring	EBH1545
15	Lever Unit	EXA1610	63	Sensor Unit	EWM1041
16	Lever	ENC1543			
17	Arm	ENC1532			
18	Frame	ENC1533			
19	Holder	ENC1547			
20	Gear	ENC1535			
21	Arm	ENC1550			
22	Roller	ENR1040			
23	Belt	ENT1027			
24	Collar	ENV1508			
25	Arm	ENV1539			
26	Arm	ENV1540			
27	Gear	ENV1569			
28	Gear	ENV1547			
29	Gear	ENR1044			
30	Worm Wheel	ENV1559			
31	Lever	ENV1551			
32	Flywheel	ENV1607			
33	Gathering PCB	ENX1073			
34	Switch(S101,S102,S103)	ESG1007			
35	Deck Unit	EWM1031			
36	Plug(CN251)	CKS3540			
37	Gathering PCB	ENX1066			
38	Motor Unit(M1)	EXA1618			
39	Motor	EXM1035			
40	Head Assy(HD1)	EXA1594			
41	Arm	ENC1537			
42	Screw	EBA1031			
43	Bracket	ENC1559			
44	Chassis Unit	EXA1636			
45	Pinch Holder Unit	EXA1608			
46	Pinch Roller	ENV1518			
47	Pinch Holder Unit	EXA1607			
48	Pinch Roller	ENV1518			
49	Reel Unit	EXA1625			

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

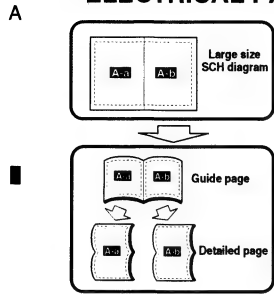
3.1 BLOCK DIAGRAM





3.2 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".



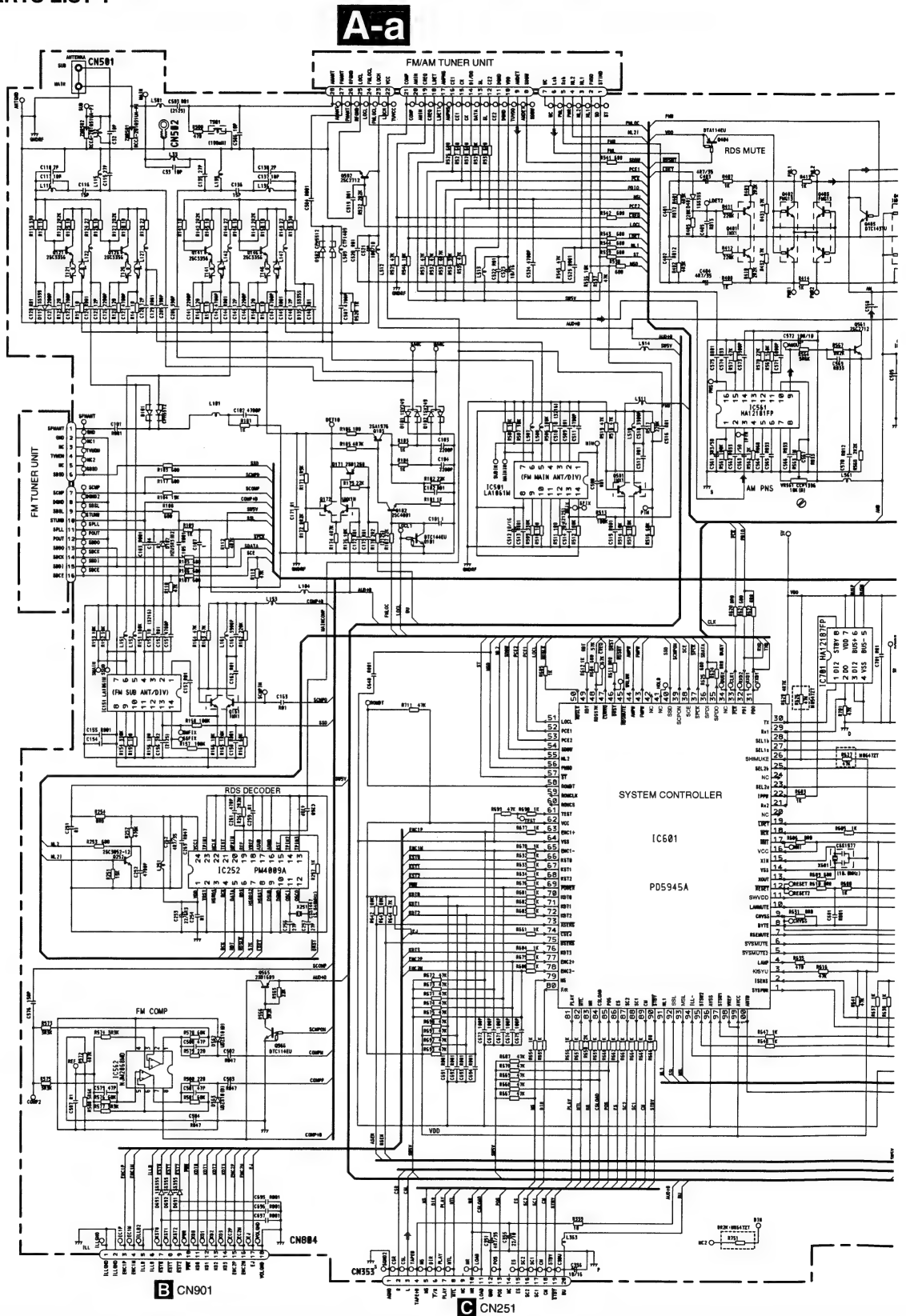
B

C

D

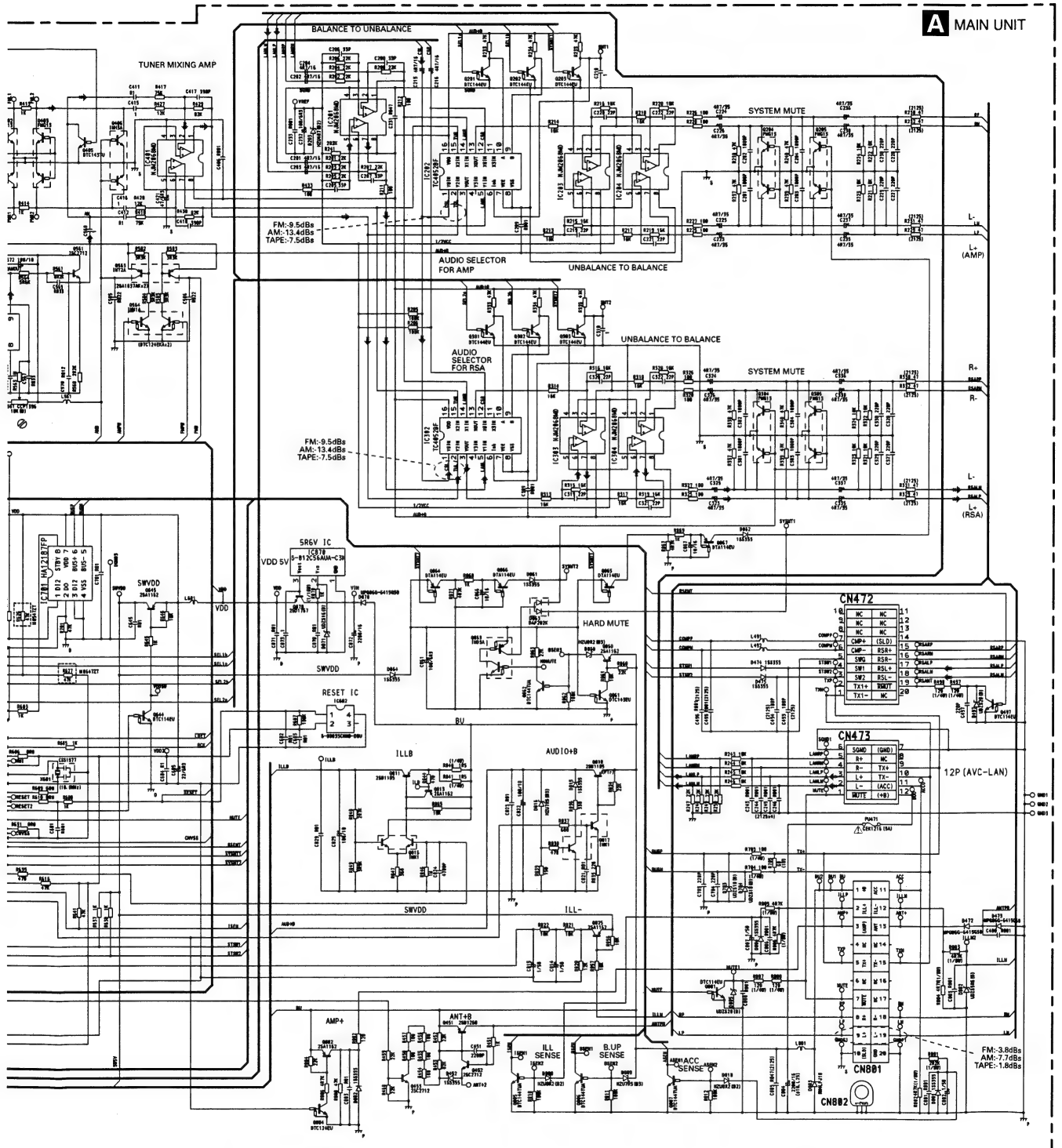
E

F



A-b

A MAIN UNIT



NOTE:

- Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as:
2.2 → 2R2
0.022 → R022

The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

KEX-M8547ZT/EW

A

A-b

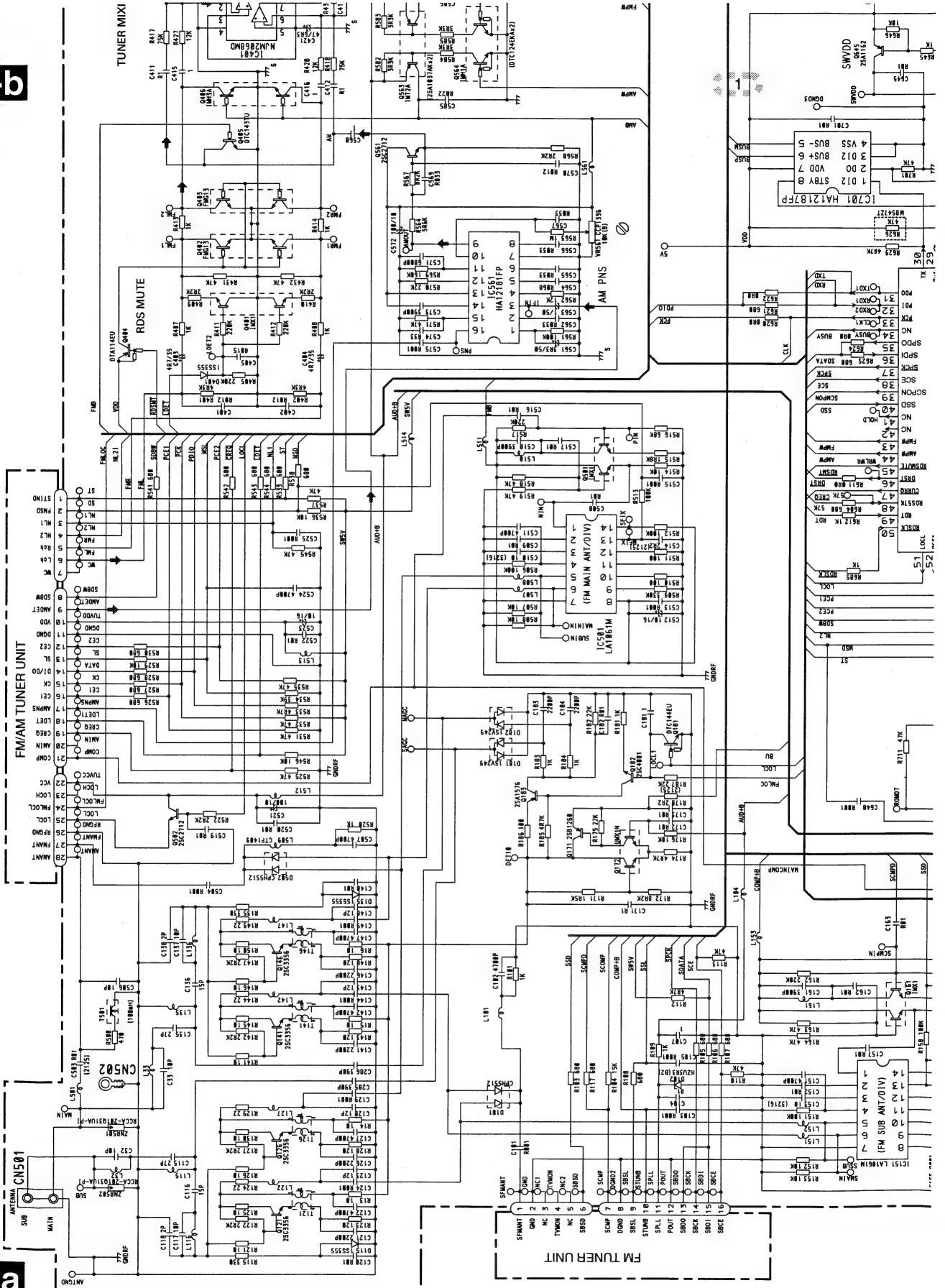
B

C

D

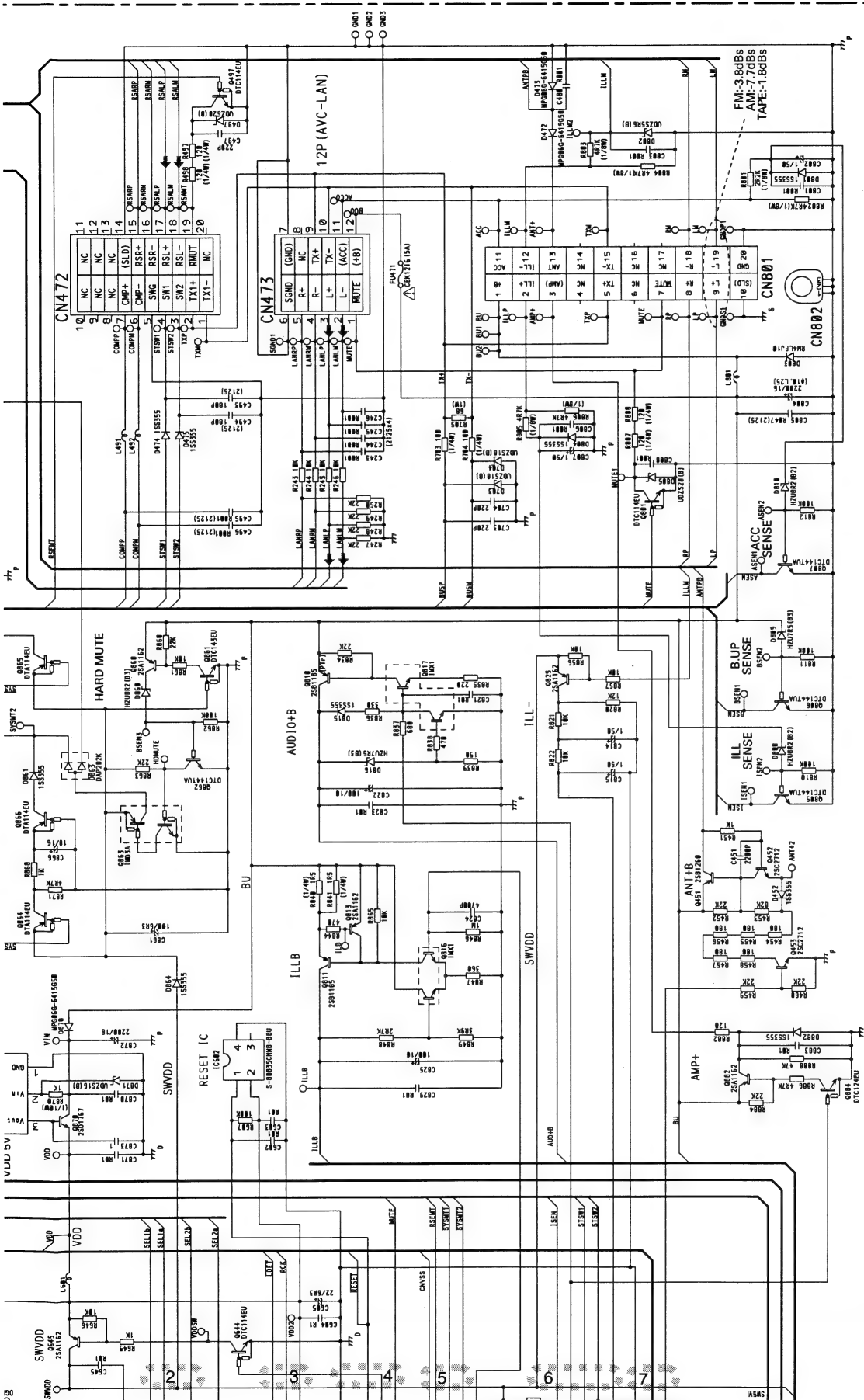
E

F



A-a

KEX-M8547ZT/EW



NOTE:

□ Symbol indicates a resistor.

No differentiation is made between chip resistors and discrete resistors.

—|— Symbol indicates a capacitor.

No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as :
2.2 → 2R2
0.022 → R022

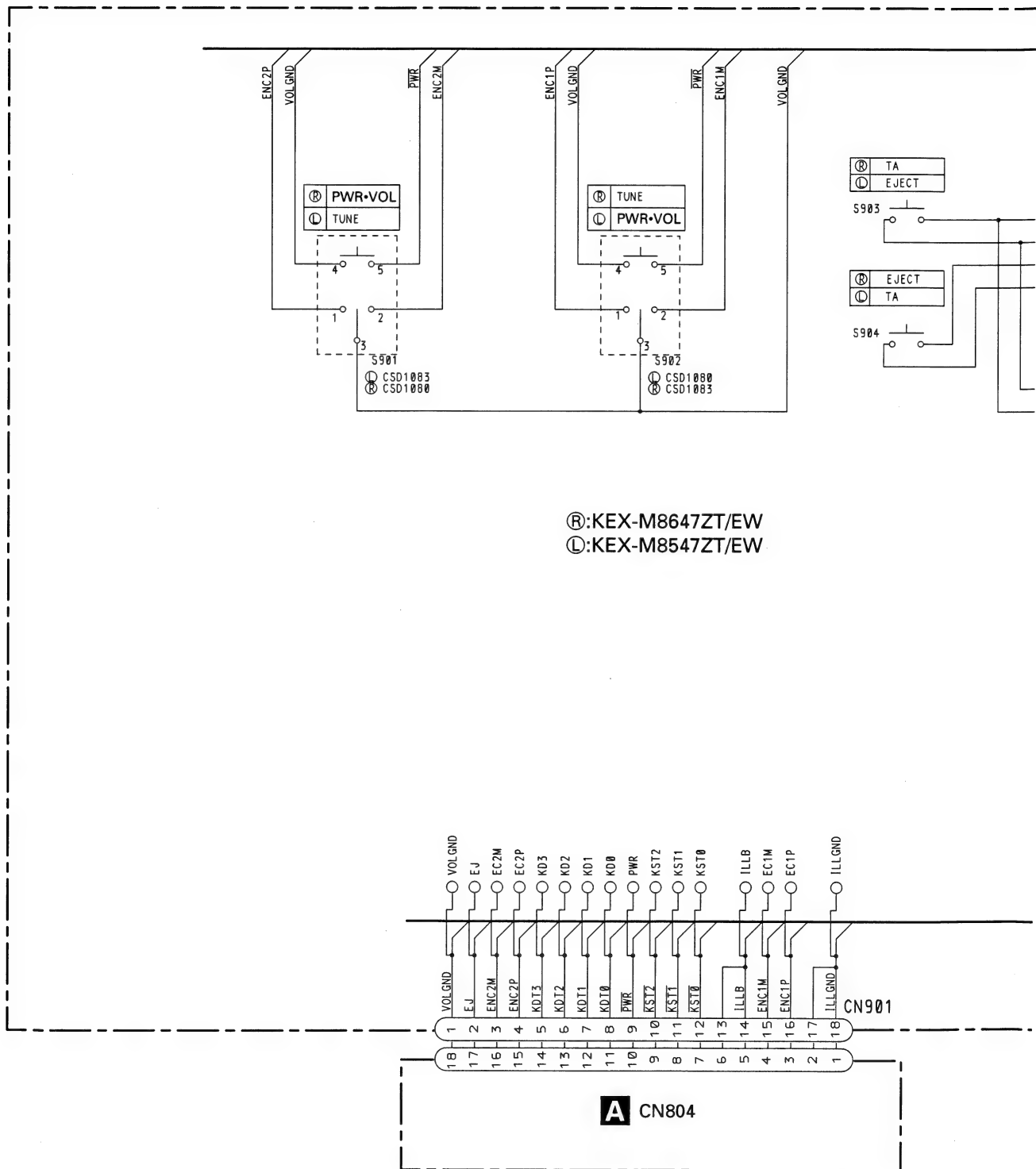
The △ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

A-a A-b

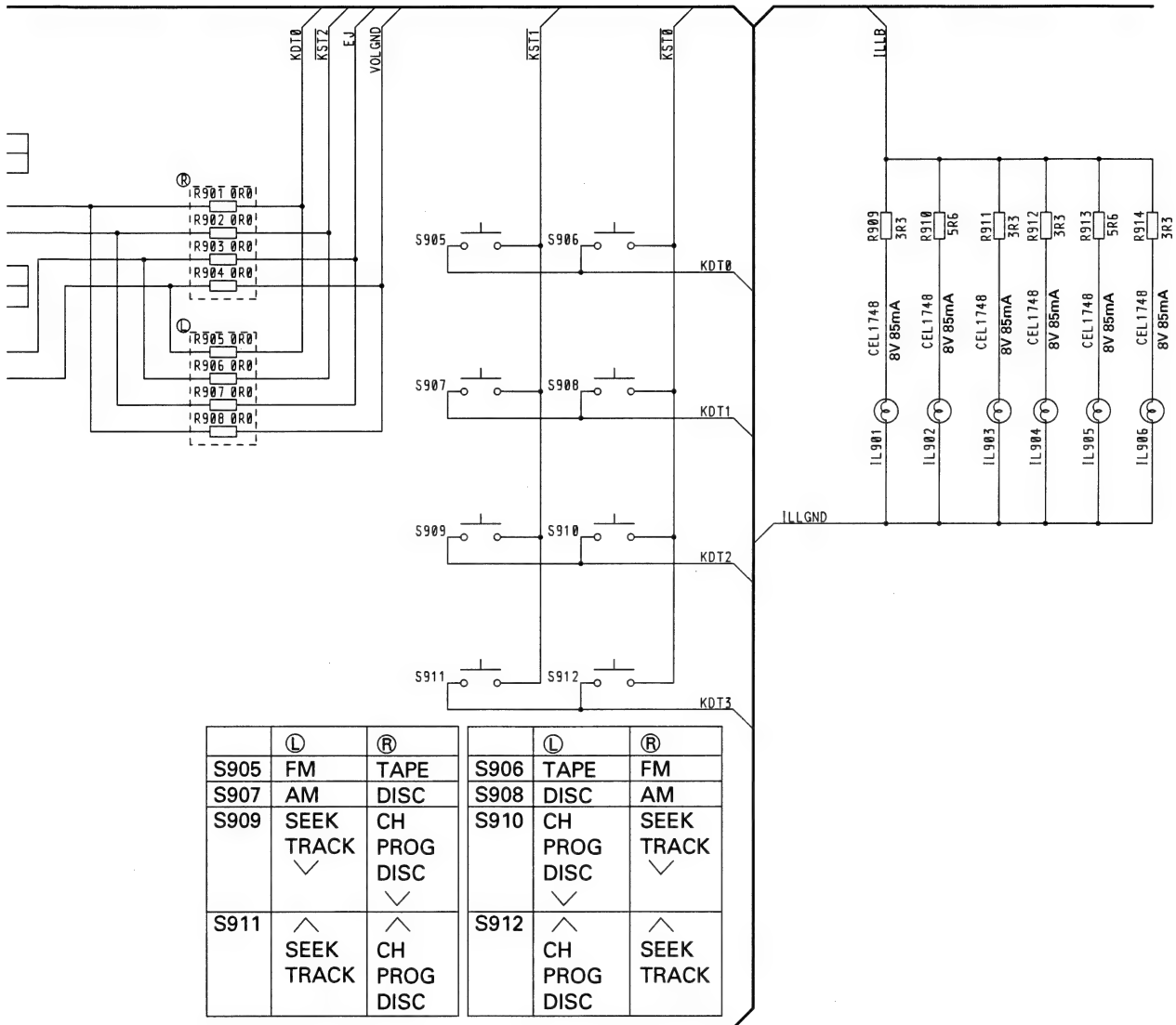
A-b

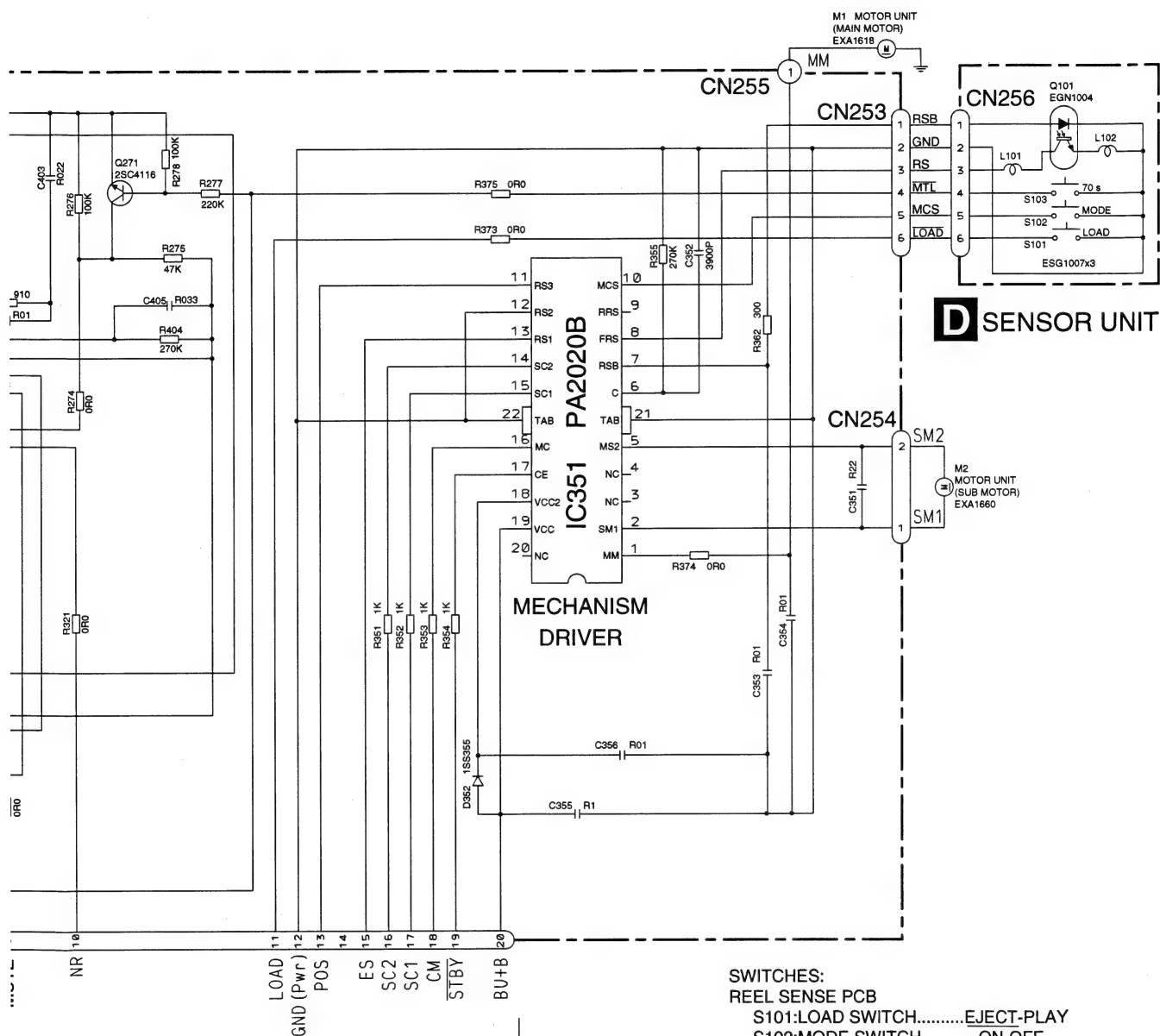
KEX-M8547ZT/EW

3.3 KEYBOARD UNIT



B KEYBOARD UNIT





N353

SIDE A

A

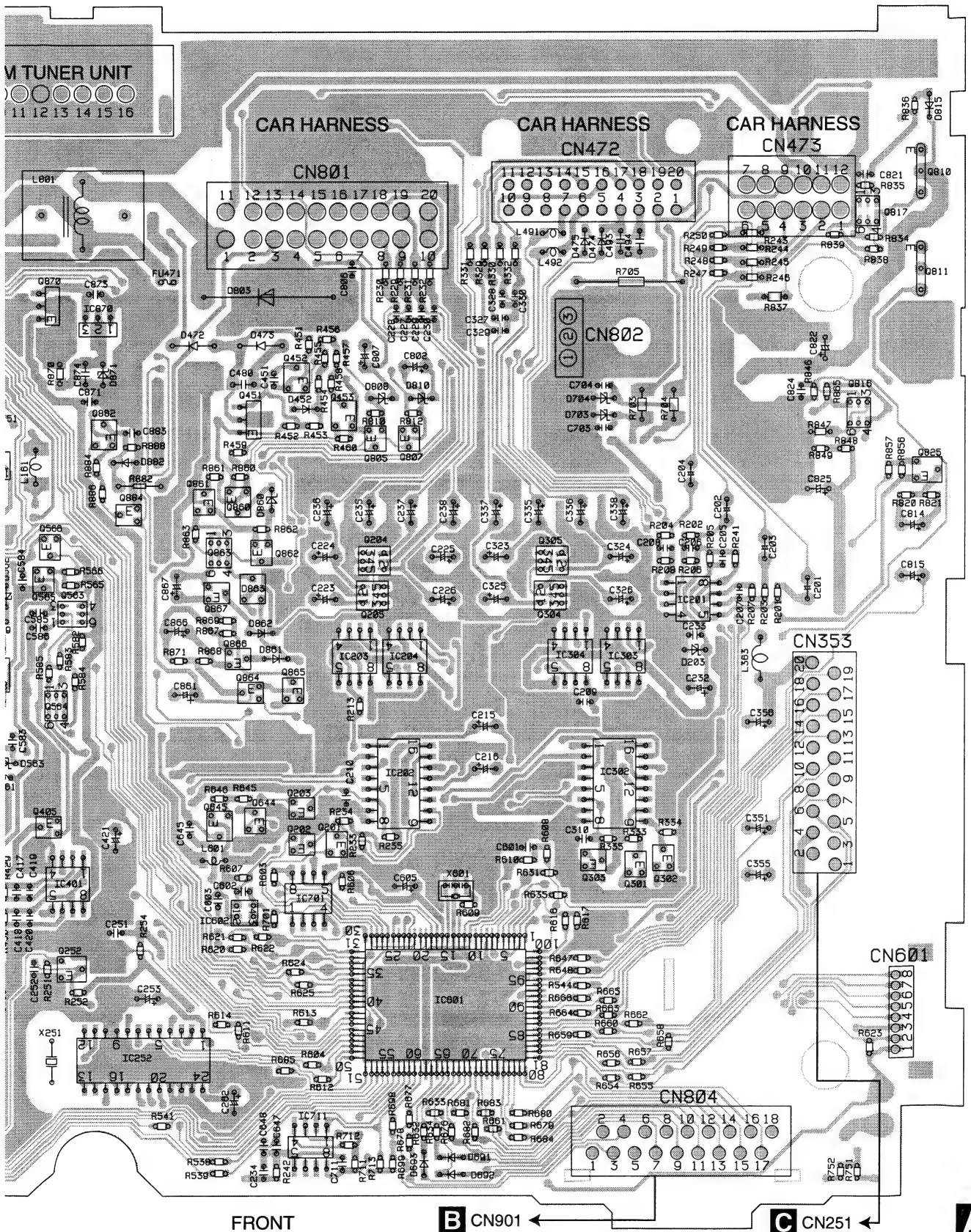
B

C

D

E

F



A

A MAIN UNIT

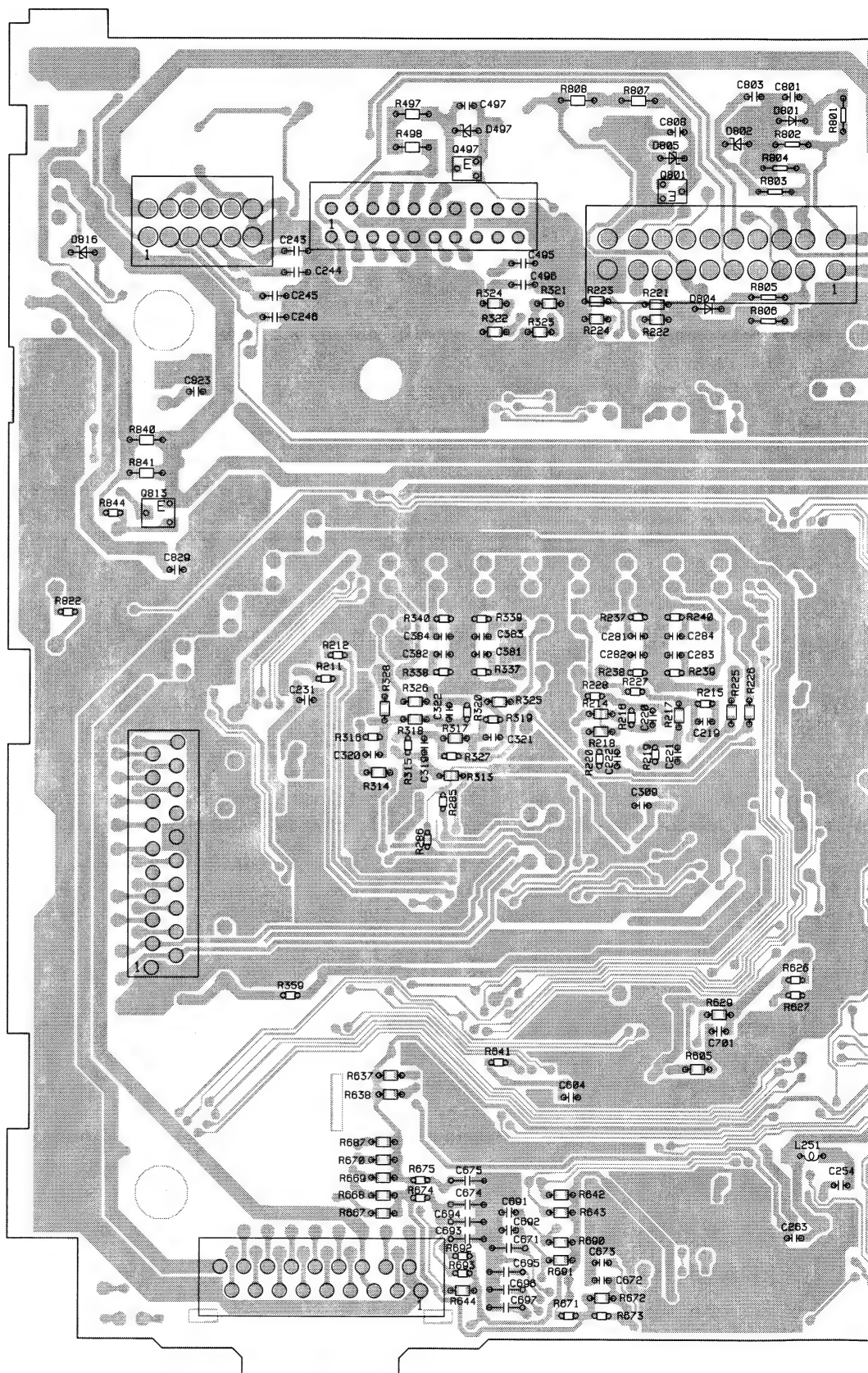
B

C

D

E

F



A

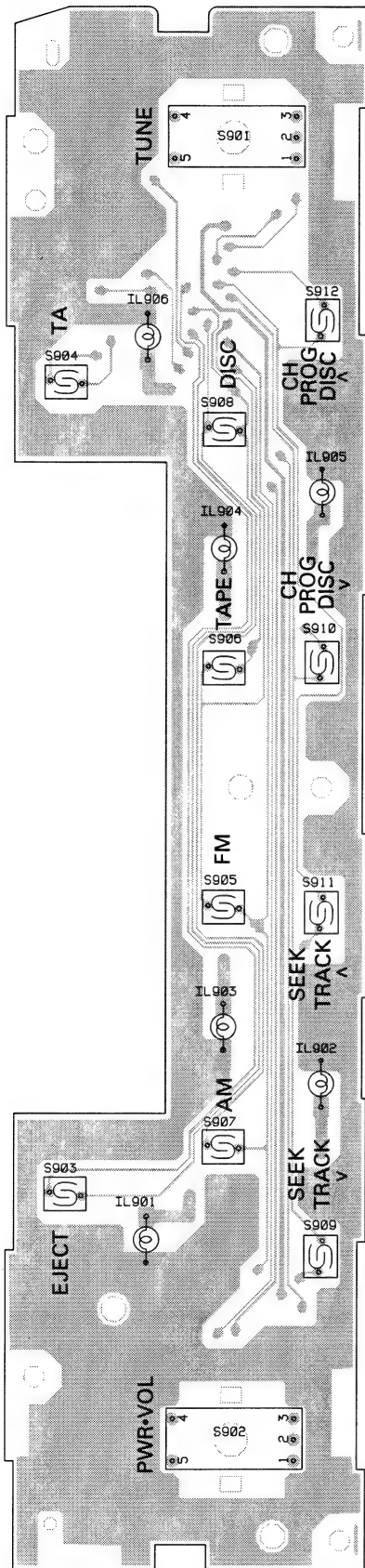
KEX-M8547ZT/EW

1 2 3 4

4.2 KEYBOARD UNIT(KEX-M8547ZT/EW)

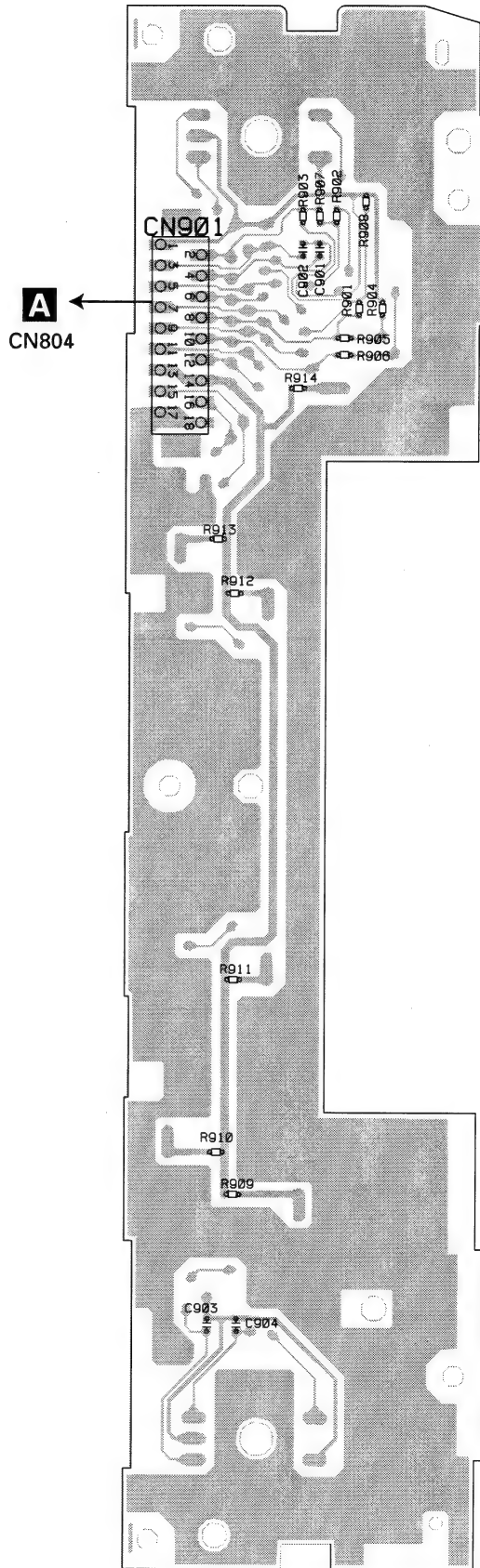
B KEYBOARD UNIT

SIDE A



B KEYBOARD UNIT

SIDE B



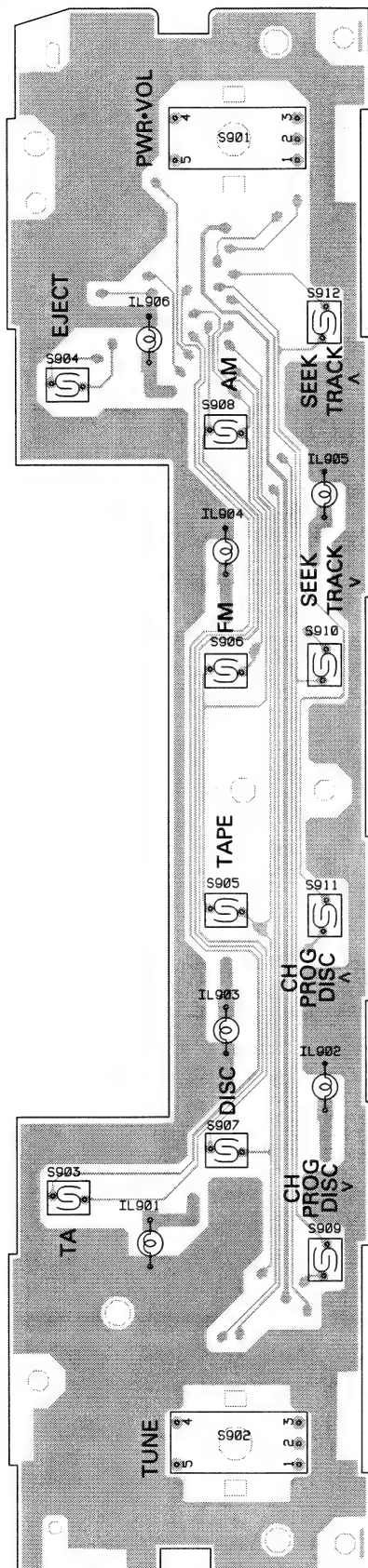
B

5 6 7 8

4.3 KEYBOARD UNIT(KEX-M8647ZT/EW)

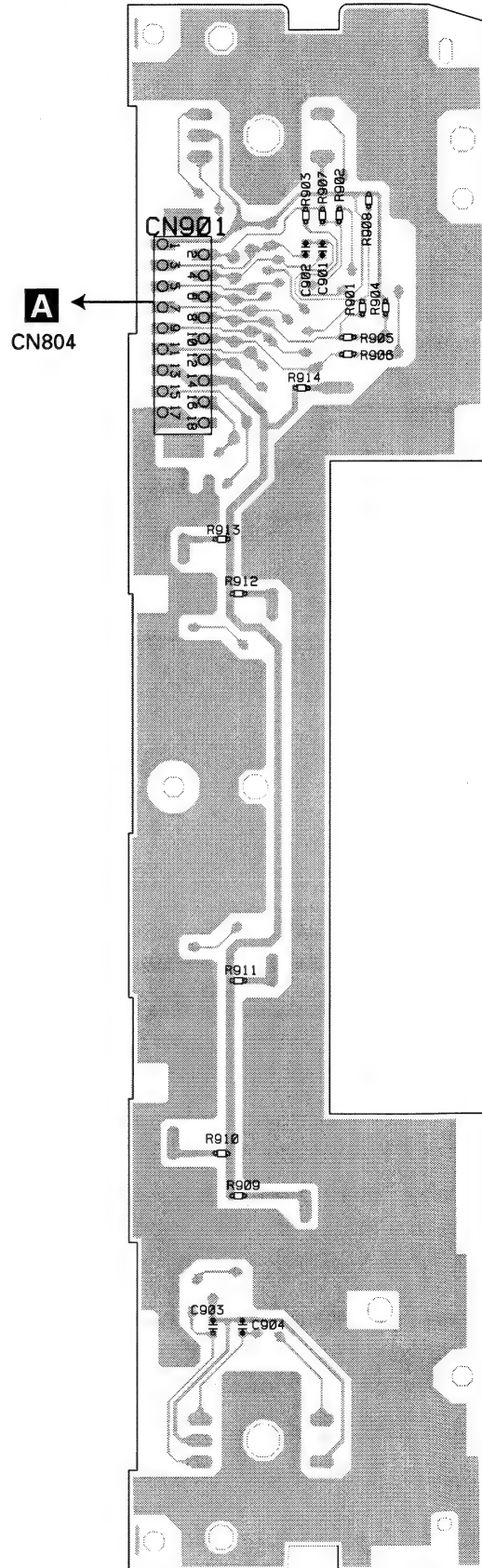
B KEYBOARD UNIT

SIDE A



B KEYBOARD UNIT

SIDE B



■ 1 ■ 2 ■ 3 ■ 4 ■

A

SIDE A



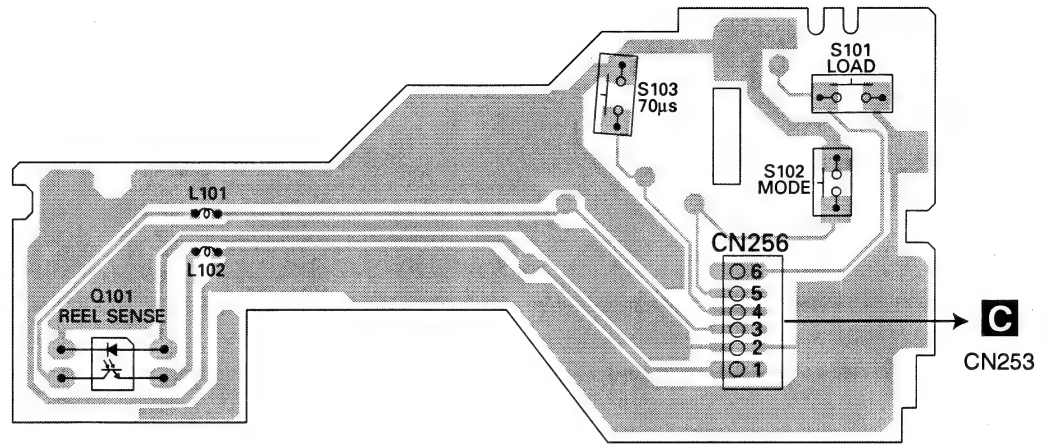
C

SIDE B



D CN256

F

D SENSOR UNIT

A

B

C

D

E

F

D

5. ELECTRICAL PARTS LIST

NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

Chip Resistor

RS1/○○○○○J,RS1/○○○○○J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

Circuit Symbol and No.

Part No.

Circuit Symbol and No.

Part No.

A
Unit Number:CWM9554 (M8547ZT)
Unit Number:CWM9555 (M8647ZT)
Unit Name:Main Unit

MISCELLANEOUS

IC 151	IC	LA1061M
IC 201	IC	NJM2068MD
IC 202	IC	TC4052BF
IC 203	IC	NJM2068MD
IC 204	IC	NJM2068MD
IC 252	IC	PM4009A
IC 302	IC	TC4052BF
IC 303	IC	NJM2068MD
IC 304	IC	NJM2068MD
IC 401	IC	NJM2068MD
IC 501	IC	LA1061M
IC 561	IC	HA12181FP
IC 562	IC	NJM2068MD
IC 601	IC	PD5945A
IC 602	IC	S-80835CNNB-B8U
IC 701	IC	HA12187FP
IC 870	IC	S-812C56AUA-C3K
Q 121	Transistor	2SC3356
Q 126	Transistor	2SC3356
Q 141	Transistor	2SC3356
Q 146	Transistor	2SC3356
Q 161	Transistor	IMX1
Q 171	Transistor	2SB1260
Q 172	Transistor	UMX1N
Q 181	Transistor	DTC144EU
Q 182	Transistor	2SC4081
Q 183	Transistor	2SA1576
Q 201	Transistor	DTC144EU
Q 202	Transistor	DTC144EU
Q 203	Transistor	DTC144EU
Q 204	Transistor	FMG13
Q 205	Transistor	FMG13
Q 252	Transistor	2SC3052-12
Q 301	Transistor	DTC144EU
Q 302	Transistor	DTC144EU
Q 303	Transistor	DTC144EU
Q 304	Transistor	FMG13
Q 305	Transistor	FMG13
Q 401	Transistor	IMX1
Q 402	Transistor	FMG13

Q 403	Transistor	FMG13
Q 404	Transistor	DTA114EU
Q 405	Transistor	DTC143TU
Q 406	Transistor	IMH3A
Q 451	Transistor	2SB1260
Q 452	Transistor	2SC2712
Q 453	Transistor	2SC2712
Q 497	Transistor	DTC114EU
Q 501	Transistor	IMX1
Q 502	Transistor	2SC2712
Q 561	Transistor	2SC2712
Q 563	Transistor	IMT2A
Q 564	Transistor	IMH1A
Q 565	Transistor	2SB1689
Q 566	Transistor	DTC114EU
Q 644	Transistor	DTC114EU
Q 645	Transistor	2SA1162
Q 801	Transistor	DTC114EU
Q 805	Transistor	DTC144TUA
Q 806	Transistor	DTC144TUA
Q 807	Transistor	DTC144TUA
Q 810	Transistor	2SB1185
Q 811	Transistor	2SB1185
Q 813	Transistor	2SA1162
Q 816	Transistor	IMX1
Q 817	Transistor	IMX1
Q 825	Transistor	2SA1162
Q 860	Transistor	2SA1162
Q 861	Transistor	DTC143EU
Q 862	Transistor	DTC144TUA
Q 863	Transistor	IMD3A
Q 864	Transistor	DTA114EU
Q 865	Transistor	DTA114EU
Q 866	Transistor	DTA114EU
Q 867	Transistor	DTA114EU
Q 870	Transistor	2SD1767
Q 882	Transistor	2SA1162
Q 884	Transistor	DTC124EU
D 101	Diode	CPH5512
D 102	Diode	HZU3R3(B2)
D 115	Diode	1SS355
D 135	Diode	1SS355
D 181	Diode	1SV249
D 182	Diode	1SV249
D 203	Diode	HZU4R7(B2)
D 401	Diode	1SS355
D 452	Diode	1SS355
D 472	Diode	MPG06G-6415G50

KEX-M8547ZT/EW

5			6			7			8		
Circuit Symbol and No.			Part No.			Circuit Symbol and No.			Part No.		
D 473	Diode		MPG06G-6415G50			L 514	Inductor		CTF1473		
D 474	Diode		1SS355			L 561	Inductor		CTF1473		
D 475	Diode		1SS355			L 601	Inductor		LCTA100J3225		A
D 497	Diode		UDZS20(B)			L 801	Coil 350μH		CTH1276		
D 502	Diode		CPH5512			T 121	Coil		CTC1187		
D 562	Diode		UDZS10(B)			T 126	Coil		CTC1187		
D 563	Diode		UDZS10(B)			T 141	Coil		CTC1187		
D 691	Diode		1SS355			T 146	Coil		CTC1187		
D 692	Diode		1SS355			T 501	Coil		CTB1102		
D 693	Diode		1SS355			X 251	Crystal Resonator 3.648MHz		CSS1447		
D 703	Diode		UDZS18(B)			X 601	Radiator 10.0MHz		CSS1577		
D 704	Diode		UDZS18(B)			VR561	Semi-fixed 10kΩ(B)		CCP1396		
D 801	Diode		1SS355			FU471	Fuse 5A		CEK1216		B
D 802	Diode		UDZS5R6(B)				FM Tuner Unit		CWE1679		
D 803	Diode		RM4LFJ10				FM/AM Tuner Unit		CWE1773		
D 804	Diode		1SS355			RESISTORS					
D 805	Diode		UDZS20(B)			R 13			RS1/16S100J		
D 808	Diode		HZU8R2(B2)			R 14			RS1/16S100J		
D 809	Diode		HZU7R5(B3)			R 15			RS1/16S100J		
D 810	Diode		HZU8R2(B2)			R 16			RS1/16S100J		
D 815	Diode		1SS355			R 101			RS1/16S102J		
D 816	Diode		HZU7R5(B3)			R 103			RS1/16S681J		
D 860	Diode		HZU8R2(B3)			R 104			RS1/16S153J		
D 861	Diode		1SS355			R 105			RS1/16S681J		C
D 862	Diode		1SS355			R 106			RS1/16S681J		
D 863	Diode		DAP202K			R 107			RS1/16S681J		
D 864	Diode		1SS355			R 108			RS1/16S681J		
D 870	Diode		MPG06G-6415G50			R 109			RS1/16S102J		
D 871	Diode		UDZS16(B)			R 110			RS1/16S473J		
D 882	Diode		1SS355			R 112			RS1/16S472J		
ZNR501	Surge Protector		RCCA-201Q31UA-PI			R 113			RS1/16S473J		
ZNR502	Surge Protector		RCCA-201Q31UA-PI			R 115			RS1/16S331J		
L 32	Inductor		LCYB12NJ1608			R 117			RS1/16S681J		
L 33	Inductor		LCYB12NJ1608			R 121			RS1/16S100J		
L 101	Inductor		CTF1409			R 122			RS1/16S222J		D
L 104	Inductor		CTF1473			R 123			RS1/16S121J		
L 115	Inductor		LCYBR12J1608			R 124			RS1/16S220J		
L 116	Inductor		LCYBR12J1608			R 125			RS1/16S100J		
L 122	Inductor		LCYBR10J1608			R 126			RS1/16S100J		
L 127	Inductor		LCYBR10J1608			R 127			RS1/16S222J		
L 135	Inductor		LCYBR12J1608			R 128			RS1/16S121J		
L 136	Inductor		LCYBR12J1608			R 129			RS1/16S220J		
L 142	Inductor		LCYBR10J1608			R 130			RS1/16S100J		
L 147	Inductor		LCYBR10J1608			R 135			RS1/16S331J		
L 151	Inductor		CTF1409			R 141			RS1/16S100J		E
L 152	Inductor		CTF1409			R 142			RS1/16S222J		
L 153	Inductor		CTF1473			R 143			RS1/16S121J		
L 161	Inductor		LCTA561J4532			R 144			RS1/16S220J		
L 251	Inductor		LCTA101J2520			R 145			RS1/16S100J		
L 363	Inductor		LFEA4R7J			R 146			RS1/16S100J		
L 491	Inductor		CTF1578			R 147			RS1/16S222J		
L 492	Inductor		CTF1578			R 148			RS1/16S121J		
L 501	Inductor		LCTA4R7J2520			R 149			RS1/16S220J		
L 507	Inductor		CTF1409			R 150			RS1/16S100J		
L 508	Inductor		CTF1409			R 151			RS1/16S104J		
L 509	Inductor		CTF1409			R 152			RS1/16S103J		F
L 510	Inductor		LCTA561J4532			R 153			RS1/16S103J		
L 511	Inductor		CTF1473			R 154			RS1/16S334J		
L 512	Inductor		LCTA1R0J2520								
L 513	Inductor		CTF1473								

	1	2	3	4
	<u>Circuit Symbol and No.</u>	<u>Part No.</u>	<u>Circuit Symbol and No.</u>	<u>Part No.</u>
A	R 155	RS1/16S101J	R 241	RS1/16S222J
	R 156	RS1/16S101J	R 243	RS1/10S103J
	R 157	RS1/16S104J	R 244	RS1/10S103J
	R 158	RS1/16S104J	R 245	RS1/10S103J
	R 161	RS1/16S683J	R 246	RS1/10S103J
	R 162	RS1/16S224J	R 247	RS1/16S223J
	R 163	RS1/16S473J	R 248	RS1/16S223J
	R 164	RS1/16S473J	R 249	RS1/16S223J
	R 165	RS1/16S182J	R 250	RS1/16S223J
	R 166	RS1/16S103J	R 251	RS1/16S153J
B	R 171	RS1/16S152J	R 252	RS1/16S474J
	R 172	RS1/16S822J	R 253	RS1/16S681J
	R 174	RS1/16S472J	R 254	RS1/16S0R0J
	R 175	RS1/16S223J	R 257	RS1/16S102J
	R 176	RS1/16S103J	R 261	RS1/16S225J
	R 178	RS1/10S2R2J	R 285	RS1/16S104J
	R 181	RS1/16S102J	R 286	RS1/16S104J
	R 182	RS1/16S223J	R 313	RS1/16S163J
	R 183	RS1/16S102J	R 314	RS1/16S163J
	R 184	RS1/16S102J	R 315	RS1/16S163J
C	R 185	RS1/16S472J	R 316	RS1/16S163J
	R 186	RS1/16S101J	R 317	RS1/16S163J
	R 187	RS1/16S223J	R 318	RS1/16S163J
	R 201	RS1/16S223J	R 319	RS1/16S163J
	R 202	RS1/16S223J	R 320	RS1/16S163J
	R 203	RS1/16S223J	R 321	RS1/16S103J
	R 204	RS1/16S223J	R 322	RS1/16S103J
	R 205	RS1/16S223J	R 323	RS1/16S103J
	R 206	RS1/16S223J	R 324	RS1/16S103J
	R 207	RS1/16S223J	R 325	RS1/16S181J
D	R 208	RS1/16S223J	R 326	RS1/16S181J
	R 211	RS1/16S101J	R 327	RS1/16S181J
	R 212	RS1/16S101J	R 328	RS1/16S181J
	R 213	RS1/16S163J	R 329	RS1/10S470J
	R 214	RS1/16S163J	R 330	RS1/10S470J
	R 215	RS1/16S163J	R 331	RS1/10S470J
	R 216	RS1/16S163J	R 332	RS1/10S470J
	R 217	RS1/16S163J	R 333	RS1/16S473J
	R 218	RS1/16S163J	R 334	RS1/16S473J
	R 219	RS1/16S163J	R 335	RS1/16S473J
E	R 220	RS1/16S163J	R 337	RS1/16S473J
	R 221	RS1/16S103J	R 338	RS1/16S473J
	R 222	RS1/16S103J	R 339	RS1/16S473J
	R 223	RS1/16S103J	R 340	RS1/16S473J
	R 224	RS1/16S103J	R 359	RS1/16S100J
	R 225	RS1/16S181J	R 401	RS1/16S432J
	R 226	RS1/16S181J	R 402	RS1/16S432J
	R 227	RS1/16S181J	R 405	RS1/16S224J
	R 228	RS1/16S181J	R 407	RS1/16S102J
	R 229	RS1/10S470J	R 408	RS1/16S102J
F	R 230	RS1/10S470J	R 409	RS1/16S222J
	R 231	RS1/10S470J	R 410	RS1/16S222J
	R 232	RS1/10S470J	R 411	RS1/16S224J
	R 233	RS1/16S473J	R 412	RS1/16S224J
	R 234	RS1/16S473J	R 413	RS1/16S102J
	R 235	RS1/16S473J	R 414	RS1/16S102J
	R 237	RS1/16S473J	R 417	RS1/16S753J
	R 238	RS1/16S473J	R 418	RS1/16S753J
	R 239	RS1/16S473J	R 427	RS1/16S123J
	R 240	RS1/16S473J	R 428	RS1/16S123J

5	6	7	8	
<u>Circuit Symbol and No.</u>	<u>Part No.</u>	<u>Circuit Symbol and No.</u>	<u>Part No.</u>	
R 429	RS1/16S823J	R 566	RS1/16S222J	
R 430	RS1/16S823J	R 567	RS1/16S822J	
R 431	RS1/16S473J	R 568	RS1/16S222J	A
R 432	RS1/16S473J	R 569	RS1/16S164J	
R 433	RS1/16S101J	R 570	RS1/16S223J	
R 451	RS1/16S102J	R 571	RS1/16S473J	
R 452	RS1/16S223J	R 572	RS1/16S472J	
R 453	RS1/16S823J	R 573	RS1/16S332J	
R 454	RS1/16S181J	R 574	RS1/16S332J	
R 455	RS1/16S181J	R 575	RS1/16S332J	
R 456	RS1/16S181J	R 576	RS1/16S683J	
R 457	RS1/16S181J	R 577	RS1/16S332J	
R 458	RS1/16S181J	R 578	RS1/16S683J	
R 459	RS1/16S223J	R 579	RS1/16S221J	B
R 460	RS1/16S223J	R 580	RS1/16S221J	
R 497	RS1/4S121J	R 581	RS1/16S683J	
R 498	RS1/4S121J	R 582	RS1/16S332J	
R 500	RS1/16S471J	R 583	RS1/16S332J	
R 506	RS1/16S104J	R 584	RS1/16S332J	
R 507	RS1/16S103J	R 585	RS1/16S332J	
R 508	RS1/16S103J	R 588	RS1/16S562J	
R 509	RS1/16S334J	R 603	RS1/16S102J	
R 510	RS1/16S101J	R 604	RS1/16S681J	
R 511	RS1/16S101J	R 605	RS1/16S102J	
R 512	RS1/16S104J	R 606	RS1/16S0R0J	C
R 513	RS1/16S104J	R 607	RS1/16S104J	
R 514	RS1/16S103J	R 608	RS1/16S102J	
R 515	RS1/16S182J	R 609	RS1/16S681J	
R 516	RS1/16S683J	R 610	RS1/16S0R0J	
R 517	RS1/16S224J	R 611	RS1/16S0R0J	
R 518	RS1/16S473J	R 612	RS1/16S102J	
R 519	RS1/16S473J	R 616	RS1/16S473J	
R 520	RS1/16S102J	R 620	RS1/16S0R0J	
R 522	RS1/16S222J	R 621	RS1/16S681J	
R 525	RS1/16S473J	R 622	RS1/16S0R0J	
R 526	RS1/16S681J	R 624	RS1/16S0R0J	D
R 527	RS1/16S681J	R 625	RS1/16S681J	
R 528	RS1/16S681J	R 626 (M8547ZT)	RS1/16S473J	
R 529	RS1/16S103J	R 627 (M8647ZT)	RS1/16S473J	
R 530	RS1/16S681J	R 629	RS1/16S472J	
R 531	RS1/16S473J	R 631	RS1/16S0R0J	
R 532	RS1/16S473J	R 632	RS1/16S102J	
R 533	RS1/16S472J	R 633	RS1/16S102J	
R 534	RS1/16S393J	R 634	RS1/16S102J	
R 535	RS1/16S473J	R 635	RS1/16S471J	
R 536	RS1/16S103J	R 637	RS1/16S102J	
R 537	RS1/16S473J	R 638	RS1/16S102J	E
R 538	RS1/16S681J	R 641	RS1/16S473J	
R 539	RS1/16S681J	R 642	RS1/16S104J	
R 541	RS1/16S681J	R 643	RS1/16S104J	
R 542	RS1/16S681J	R 644	RS1/16S473J	
R 543	RS1/16S681J	R 645	RS1/16S102J	
R 544	RS1/16S681J	R 646	RS1/16S103J	
R 545	RS1/16S473J	R 647	RS1/16S102J	
R 546	RS1/16S103J	R 648	RS1/16S102J	
R 561	RS1/16S104J	R 654	RS1/16S102J	
R 562	RS1/16S123J	R 655	RS1/16S102J	
R 563	RS1/16S105J	R 656	RS1/16S102J	F
R 564	RS1/16S562J	R 657	RS1/16S102J	
R 565	RS1/16S223J	R 658	RS1/16S223J	

1	2	3	4
<u>Circuit Symbol and No.</u>	<u>Part No.</u>	<u>Circuit Symbol and No.</u>	<u>Part No.</u>
R 659	RS1/16S102J	R 840	RS1/4S1R5J
R 660	RS1/16S102J	R 841	RS1/4S1R5J
R 661	RS1/16S102J	R 844	RS1/16S471J
A			
R 662	RS1/16S102J	R 846	RS1/16S105J
R 663	RS1/16S102J	R 847	RS1/10S361J
R 664	RS1/16S102J	R 848	RS1/16S272J
R 665	RS1/16S102J	R 849	RS1/16S392J
R 666	RS1/16S681J	R 856	RS1/16S103J
R 667	RS1/16S473J	R 857	RS1/16S103J
R 668	RS1/16S473J	R 860	RS1/16S223J
R 669	RS1/16S473J	R 861	RS1/16S103J
R 670	RS1/16S473J	R 862	RS1/16S104J
R 671	RS1/16S473J	R 863	RS1/16S223J
B			
R 672	RS1/16S473J	R 865	RS1/16S103J
R 673	RS1/16S473J	R 867	RS1/16S472J
R 674	RS1/16S473J	R 868	RS1/16S102J
R 675	RS1/16S473J	R 869	RS1/16S102J
R 676	RS1/16S102J	R 870	RS1/10S102J
R 677	RS1/16S102J	R 871	RS1/16S472J
R 678	RS1/16S102J	R 882	RD1/4PU121J
R 679	RS1/16S102J	R 884	RS1/16S223J
R 680	RS1/16S102J	R 886	RS1/16S472J
R 681	RS1/16S102J	R 888	RS1/16S473J
C		<u>CAPACITORS</u>	
R 682	RS1/16S102J	C 32	CCSRCH100D50
R 683	RS1/16S102J	C 33	CCSRCH100D50
R 684	RS1/16S102J	C 101	CKSRYB102K50
R 685	RS1/16S102J	C 102	CKSRYB472K50
R 687	RS1/16S473J	C 103	CKSRYB102K50
R 690	RS1/16S473J		
R 691	RS1/16S473J	C 104	CKSRYB104K25
R 692	RS1/16S473J	C 105	CKSRYB102K50
R 693	RS1/16S473J	C 107	CKSRYB105K10
R 698	RS1/16S102J	C 115	CCSRCH270J50
R 699	RS1/16S473J	C 116	CCSRCH150J50
D			
R 701	RS1/16S473J		
R 703	RS1/4S101J	C 117	CCSRCH100D50
R 704	RS1/4S101J	C 118	CCSRCK2R0C50
R 705	RS1PMF680J	C 120	CKSRYB103K50
R 711	RS1/16S473J	C 121	CKSRYB222K50
R 751	RS1/16S822J	C 122	CKSRYB472K50
R 801	RS1/8S222J	C 123	CCSRCH120J50
R 802	RS1/8S472J	C 124	CKSRYB102K50
R 803	RS1/8S472J	C 126	CKSRYB222K50
R 804	RS1/8S472J	C 127	CKSRYB472K50
R 805	RS1/8S472J	C 128	CCSRCH120J50
E			
R 806	RS1/8S472J	C 129	CKSRYB102K50
R 807	RS1/4S121J	C 135	CCSRCH270J50
R 808	RS1/4S121J	C 136	CCSRCH150J50
R 810	RS1/16S104J	C 137	CCSRCH100D50
R 811	RS1/16S104J	C 138	CCSRCK2R0C50
R 812	RS1/16S104J	C 140	CKSRYB103K50
R 820	RS1/16S123J	C 141	CKSRYB222K50
R 821	RS1/16S103J	C 142	CKSRYB472K50
R 822	RS1/16S103J	C 143	CCSRCH120J50
R 834	RS1/16S223J	C 144	CKSRYB102K50
R 835	RS1/16S221J		
F			
R 836	RS1/16S331J	C 146	CKSRYB222K50
R 837	RS1/16S681J	C 147	CKSRYB472K50
R 838	RS1/16S471J	C 148	CCSRCH120J50
R 839	RS1/16S151J	C 149	CKSRYB102K50
		C 151	CKSRYB472K50

(M8647ZT)

5	6	7	8	
<u>Circuit Symbol and No.</u>	<u>Part No.</u>	<u>Circuit Symbol and No.</u>	<u>Part No.</u>	
C 152	CKSRYB103K50	C 261	CCSRCH471J50	A
C 153	CKSYB106K6R3	C 262	CEJQ4R7M35	
C 154	CKSRYB105K10	C 263	CKSRYB473K50	
C 155	CKSRYB102K50	C 281	CKSRYB182K50	
C 156	CKSQYB225K10	C 282	CKSRYB182K50	
C 157	CKSRYB103K50	C 283	CKSRYB182K50	
C 158	CKSRYB102K50	C 284	CKSRYB182K50	
C 161	CKSRYB392K50	C 285	CCSRCH391J50	
C 162	CKSRYB103K50	C 286	CCSRCH391J50	
C 163	CKSRYB103K50	C 309	CKSRYB102K50	
C 171	CKSRYB104K16	C 310	CKSRYB105K10	
C 172	CKSRYB103K50	C 319	CCSRCH220J50	
C 173	CKSRYB103K50	C 320	CCSRCH220J50	
C 181	CKSRYB105K10	C 321	CCSRCH220J50	B
C 182	CKSRYB103K50	C 322	CCSRCH220J50	
C 183	CKSRYB222K50	C 323	4.7μF/35V	
C 184	CKSRYB222K50	C 324	4.7μF/35V	
C 201	CEJQNP4R7M16	C 325	4.7μF/35V	
C 202	CEJQNP4R7M16	C 326	4.7μF/35V	
C 203	CEJQNP4R7M16	C 327	CCSRCH221J50	
C 204	CEJQNP4R7M16	C 328	CCSRCH221J50	
C 205	CCSRCH330J50	C 329	CCSRCH221J50	
C 206	CCSRCH330J50	C 330	CCSRCH221J50	
C 207	CCSRCH330J50	C 335	4.7μF/35V	
C 208	CCSRCH330J50	C 336	4.7μF/35V	C
C 209	CKSRYB102K50	C 337	4.7μF/35V	
C 210	CKSRYB105K10	C 338	4.7μF/35V	
C 215	CEJQNP4R7M16	C 351		
C 216	CEJQNP4R7M16	C 355		
C 219	CCSRCH220J50	C 356	CEJQ100M16	
C 220	CCSRCH220J50	C 381	CKSRYB182K50	
C 221	CCSRCH220J50	C 382	CKSRYB182K50	
C 222	CCSRCH220J50	C 383	CKSRYB182K50	
C 223	4.7μF/35V	C 384	CKSRYB182K50	
C 224	4.7μF/35V	C 401	CKSRYB123K50	
C 225	4.7μF/35V	C 402	CKSRYB123K50	D
C 226	4.7μF/35V	C 403	CCH1432	
C 227		C 404	4.7μF/35V	
C 228		C 405	CKSRYB153K50	
C 229		C 406	CKSRYB102K50	
C 230	CCSRCH221J50	C 411	CKSRYB104K16	
C 231	CKSRYB473K50	C 412	CKSRYB104K16	
C 232	CEJQ101M6R3	C 415	CKSRYB105K10	
C 233	CKSRYB102K50	C 416	CKSRYB105K10	
C 235	4.7μF/35V	C 417	CCSRCH391J50	
C 236	4.7μF/35V	C 418	CCSRCH391J50	E
C 237	4.7μF/35V	C 421	CEJQ470M6R3	
C 238	4.7μF/35V	C 451	CKSRYB222K50	
C 243		C 480	CKSQYB102K50	
C 244		C 493	CCSQCH181J50	
C 245	CKSQYB102K50	C 494	CCSQCH181J50	
C 246	CKSQYB102K50	C 495	CKSQYB102K50	
C 251	CKSRYB104K16	C 496	CKSQYB102K50	
C 252	CKSRYB472K50	C 497	CCSRCH221J50	
C 253	CEJQ220M6R3	C 503	CKSQYB103K50	
C 254	CKSRYB104K16	C 504	CKSRYB102K50	F
C 256	CCSRCH270J50	C 506	CCSRCH100D50	
C 257	CCSRCH270J50	C 507	CKSRYB472K50	
C 259	CKSRYB104K16	C 508	CKSRYB103K50	
C 260	CCSRCH471J50	C 509	CKSRYB103K50	

1	2	3	4
Circuit Symbol and No.	Part No.	Circuit Symbol and No.	Part No.
A	C 510	C 701	CKSBYB103K50
	C 511	C 703	CCSRCH221J50
	C 512	C 704	CCSRCH221J50
	C 513	C 801	CKSBYB102K50
	C 514	C 802	CEJQ1R0M50
B	C 515	C 803	CKSBYB102K50
	C 516	C 804	CCH1405(P35)
	C 517	C 805	CKSQYB473K50
	C 518	C 806	CKSBYB102K50
	C 519	C 807	CEJQ1R0M50
C	C 520	C 808	CKSBYB102K50
	C 521	C 814	CEJQ1R0M50
	C 522	C 815	CEJQ1R0M50
	C 523	C 821	CKSBYB103K50
	C 524	C 822	CCH1402
D	C 525	C 823	CKSBYB103K50
	C 561	C 824	CKSBYB472K50
	C 562	C 825	CCH1402
	C 563	C 829	CKSBYB103K50
	C 564	C 861	CEJQ101M6R3
E	C 565	C 866	CEJQ100M16
	C 566	C 867	CEJQ100M16
	C 567	C 870	CKSBYB103K50
	C 568	C 871	CKSBYB103K50
	C 569	C 872	CCH1405(P35)
F	C 570	C 873	CKSBYB105K10
	C 571	C 883	CKSBYB103K50
	C 572		
	C 573		
	C 574		
G	C 575		
	C 576		
	C 579		
	C 580		
	C 581		
H	C 582		
	C 583		
	C 584		
	C 585		
	C 586		
I	C 587		
	C 601		
	C 602		
	C 603		
	C 604		
J	C 605		
	C 645		
	C 648		
	C 671		
	C 672		
K	C 673		
	C 674		
	C 675		
	C 691		
	C 692		
L	C 693		
	C 694		
	C 695		
	C 696		
	C 697		

B
Unit Number:CWS1338(M8547ZT)
Unit Number:CWS1339(M8647ZT)
Unit Name:Keyboard Unit

MISCELLANEOUS

S 901	Encoder(M8547ZT)	CSD1083
S 901	Encoder(M8647ZT)	CSD1080
S 902	Encoder(M8547ZT)	CSD1080
S 902	Encoder(M8647ZT)	CSD1083
IL 901	Lamp 8V 85mA	CEL1748
IL 902	Lamp 8V 85mA	CEL1748
IL 903	Lamp 8V 85mA	CEL1748
IL 904	Lamp 8V 85mA	CEL1748
IL 905	Lamp 8V 85mA	CEL1748
IL 906	Lamp 8V 85mA	CEL1748

RESISTORS

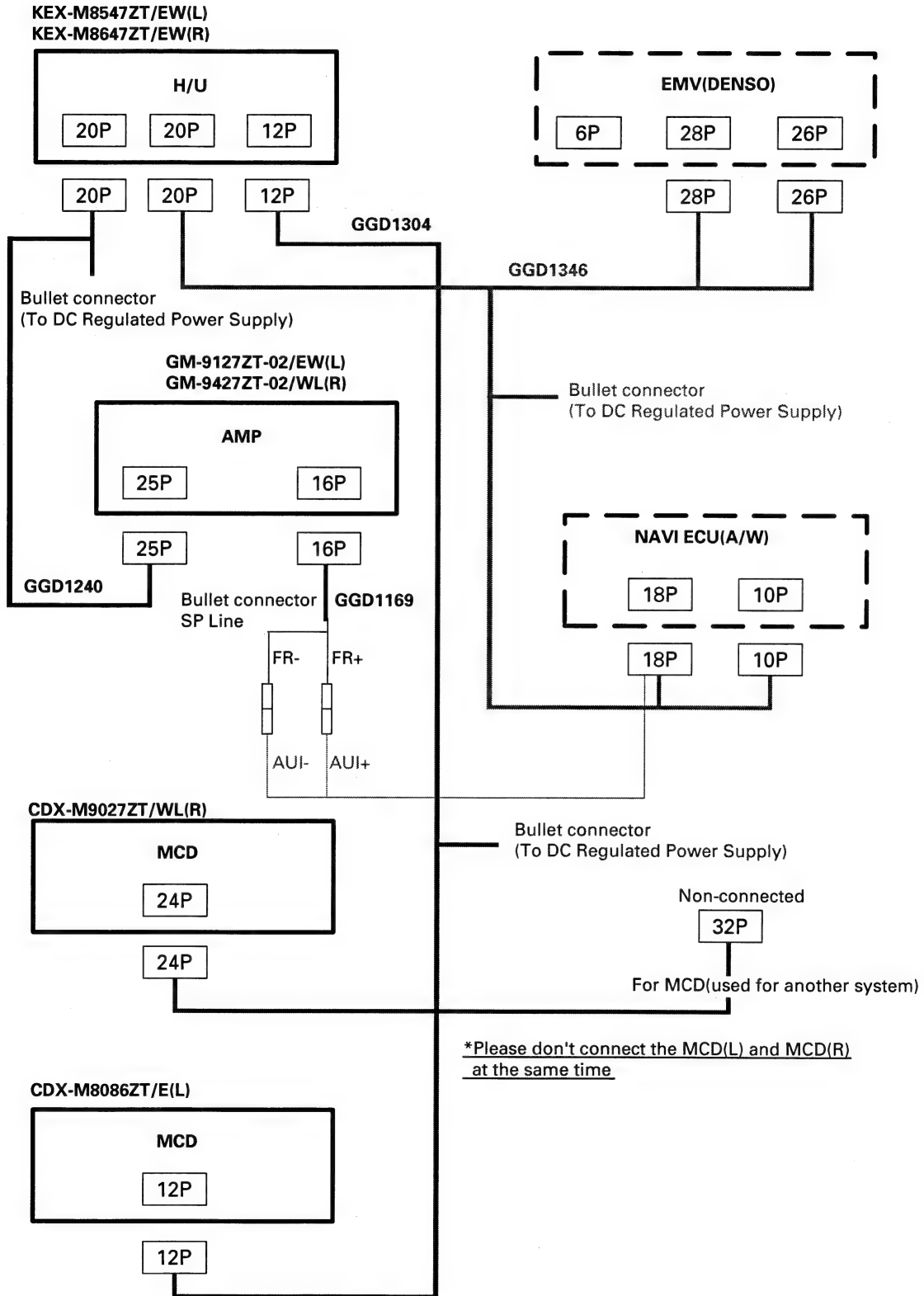
R 901	(M8647ZT)	RS1/16S0R0J
R 902	(M8647ZT)	RS1/16S0R0J
R 903	(M8647ZT)	RS1/16S0R0J
R 904	(M8647ZT)	RS1/16S0R0J
R 905	(M8547ZT)	RS1/16S0R0J
R 906	(M8547ZT)	RS1/16S0R0J
R 907		RS1/16S0R0J
R 908	(M8547ZT)	RS1/16S0R0J
R 909		RS1/16S3R3J
R 910		RS1/16S5R6J
R 911		RS1/16S3R3J
R 912		RS1/16S3R3J

5		6		7		8	
Circuit Symbol and No.		Part No.		Circuit Symbol and No.		Part No.	
R 913		RS1/16S5R6J		CAPACITORS			
R 914		RS1/16S3R3J		C 251		CKSRYB391K50	
C				C 252		CKSRYB391K50	
Unit Number:EWM1031				C 253		CKSRYB391K50	
Unit Name:Deck Unit				C 254		CKSRYB391K50	
MISCELLANEOUS				C 255		CKSRYB103K50	
IC 251 IC		HA12216F		C 256		CKSRYB103K50	
IC 351 IC		PA2020B		C 271 1μF/50V		ECH0002	
Q 271 Transistor		2SC4116		C 272		CKSRYB104K25	
D 352 Diode		1SS355		C 301		CKSRYB104K25	
VR301 Semi-fixed 33kΩ(B)		CCP1280		C 302		CKSRYB104K25	
VR302 Semi-fixed 33kΩ(B)		CCP1280		C 309		CKSRYB104K25	
RESISTORS				C 310		CKSRYB104K25	
R 255		RS1/16S181J		C 351		CKSQYB224K16	
R 256		RS1/16S181J		C 352		CKSRYB392K50	
R 257		RS1/16S183J		C 353		CKSRYB103K50	
R 258		RS1/16S183J		C 354		CKSRYB103K50	
R 259		RS1/16S133J		C 355		CKSQYB104K50	
R 260		RS1/16S133J		C 356		CKSRYB103K50	
R 261		RS1/16S274J		C 401		CKSRYB392K50	
R 262		RS1/16S274J		C 402		CKSRYB334K10	
R 271		RS1/16S183J		C 403		CKSRYB223K25	
R 272		RS1/8S0R0J		C 404		CKSRYB103K50	
R 273		RS1/8S0R0J		C 405		CKSRYB333K16	
R 274		RS1/16S0R0J		D			
R 275		RS1/16S473J		Unit Number:EWM1041			
R 276		RS1/16S104J		Unit Name:Sensor Unit			
R 277		RS1/16S224J		MISCELLANEOUS			
R 278		RS1/16S104J		L 101 Inductor		CTF1546	
R 281		RS1/8S0R0J		L 102 Inductor		CTF1546	
R 282		RS1/8S0R0J		S 101 Switch(LOAD)		ESG1007	
R 283		RS1/8S0R0J		S 102 Switch(MODE)		ESG1007	
R 284		RS1/8S0R0J		S 103 Switch(70μS)		ESG1007	
R 285		RS1/16S0R0J		Q 101 Photo-reflector		EGN1004	
R 287		RS1/16S0R0J		Miscellaneous Parts List			
R 291		RS1/8S0R0J		M 1 Motor Unit(MAIN)		EXA1618	
R 292		RS1/10S0R0J		M 2 Motor Unit(SUB)		EXA1660	
R 293		RS1/10S0R0J		HD1 Head Assy		EXA1594	
R 294		RS1/10S0R0J					
R 321		RS1/8S0R0J					
R 322		RS1/8S0R0J					
R 351		RS1/16S102J					
R 352		RS1/16S102J					
R 353		RS1/16S102J					
R 354		RS1/16S102J					
R 355		RS1/16S274J					
R 362		RS1/8S301J					
R 373		RS1/16S0R0J					
R 374		RS1/8S0R0J					
R 375		RS1/8S0R0J					
R 401		RS1/16S153J					
R 402		RS1/16S332J					
R 403		RS1/16S911J					
R 404		RS1/16S274J					

6. ADJUSTMENT

6.1 JIG CONNECTION DIAGRAM

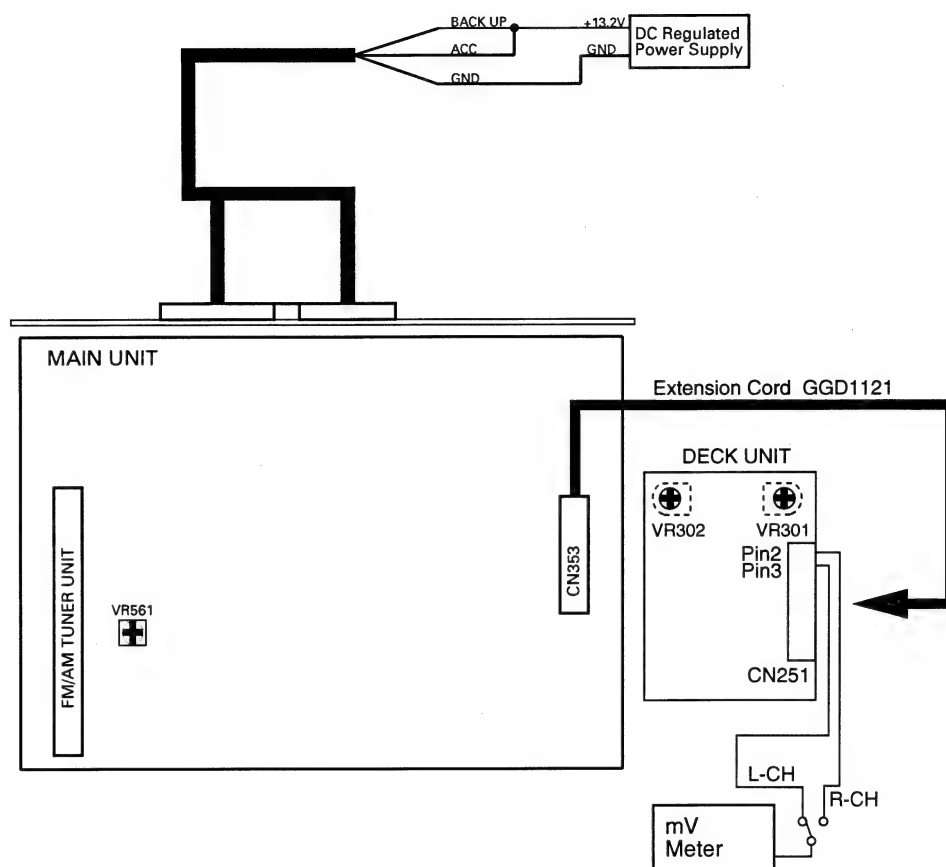
● Connection Diagram TOYOTA EMV SYSTEM MODEL



6.2 CASSETTE AND AUDIO ADJUSTMENT



● Connection Diagram

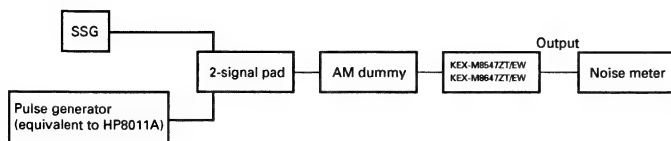


DOLBY B NR ADJUSTMENT

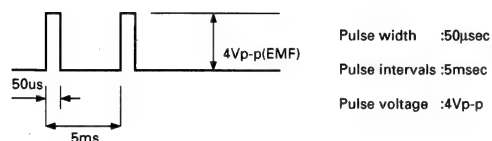
No.	Test Tape	Adjustment Point	Adjustment Method (Switch Position)
1	NCT-150 (400Hz, 200nwb/m)	VR301(Lch), VR302(Rch)	mV Meter : - 8.24dBm \pm 1dB (DOLBY NR Switch : OFF)

A AM NOISE CANCELER ADJUSTMENT

Connection:



Setting of the pulse generator. (setting of superimposed pulse)



Adjustment:

1. Setting of SSG

Receiving frequency : 999 kHz

Percentage modulation : 30%

Modulation frequency : 400 Hz

Antenna input : 74 dBμV (EMF)

2. Tune a RADIO to the "999kHz" with 1 condition.

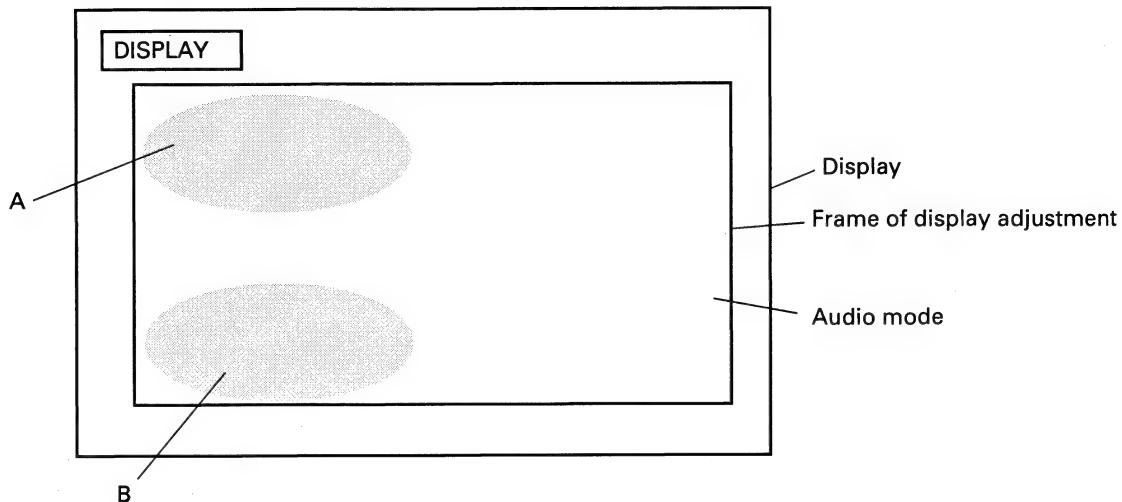
3. Mix signal with the above-mentioned pulse and SSG modulation OFF.

4. Variable resistance adjust noise level to a minimum.

Adjustment point : VR561

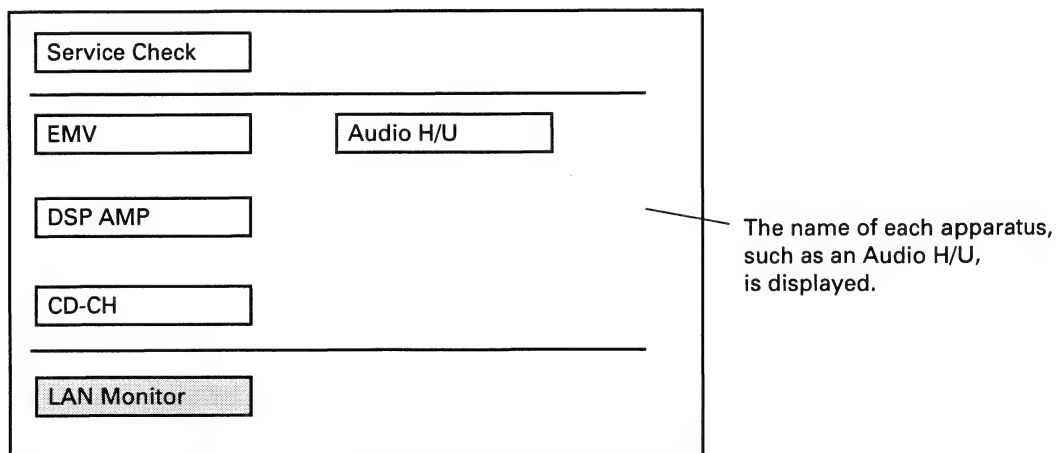
6.3 SELF-DIAGNOSIS FUNCTION

1.To Service Check



1. Press [AUDIO] key of EMV .
2. Press [DISPLAY] key of EMV .
3. The position of A and B is order of pushed 6 times in A,B,A,B,A and B.
->Service Check screen is displayed.

2.Service Check



->As it is, it waits for a while.
(In general less than 1 minute)



A

Service Check

EMV OK Audio H/U CHEK

DSP AMP OK

CD-CH NCON

LAN Monitor

When displayed as [CHEK] or [EXCH], details will be displayed if the portion is touched.

It changes on the screen which displays the abnormalities on communication.

The diagnostic result of each model is displayed.

Results are [OK], [NCON], [CHEK], and [EXCH].

OK : No error code

NCON : EMV has judged it as the thing without connection.

(Disconnection being possible if there is actually connection)

CHEK : An error code indicating that diagnosis is judged to be necessary is entered.

EXCH : An error code indicating that exchange is judged to be necessary is entered.

C

D

Unit Check Mode Audio H/U

Current Memory Occurred Date/Time

61-40

The detected abnormalities (Diagnosis code) are displayed. At this example, it is 40 (abnormalities in mechanism or media) of 61 (= cassette).

E

3.How to exit from the diagnostic test mode

ACC-OFF

F

Diagnosis code table

Logical address name	Logical address	Diagnosis code	Diagnosis details
Communication control	01H	00	No diagnosis
		01	Abnormal reset
		10	Abnormal +B
		11	Abnormal ACC
		12	Abnormal MUTE
		13	Fuse broken
		20	Microcomputer abnormal
		21	ROM - abnormal
		22	RAM - abnormal
		23	Bus - abnormal
		24	F-ROM - abnormal
		25	V-RAM - abnormal
		26	Gate array abnormal
		27	Paint controller abnormal
		28	Backup memory abnormal
		29	Voice output controller abnormal
		2A	Internal power supply abnormal
		30	Sync signal abnormal (input)
		31	Sync signal abnormal (output)
		D0	ECU not connected
		D1	Transmission abnormal
		D2	Connecting confirmation: abnormal
		D4	Connecting confirmation: no response
		D5	Registered device data missing (History of registered devices)
		D6	Master unavailable
		D7	Connecting confirmation: abnormal
		D8	Connecting confirmation: no response
		D9	Last mode abnormal
		DA	Command/order: no response
		DB	Mode status abnormal
		DC	Transmission fault
		DD	Master reset
		DE	Slave reset
		DF	Master abnormal
		E0	Registration completion acknowledgement error
		E1	Voice processor ON abnormal
		E2	ON/OFF command or parameter abnormal
		E3	Registration command transmission
		E4	Multiple frames intermit
		FF	Diagnosis - no response

Logical address name	Logical address	Diagnosis code	Diagnosis details
Radio	60H	10	AM tuner PLL unlocked
		11	FM tuner PLL unlocked
		40	No antenna connected
		41	Antenna power supply abnormal
		42	Tuner power supply abnormal
		43	AM tuner abnormal
		44	FM tuner abnormal
		45	SW tuner abnormal
		10	TV tuner PLL unlocked
		11	FRONTEND abnormal
TV tuner	40H	40	TV divergence shifting error
		41	TV - no reception
		42	VNR screen error
		43	No antenna connected
		44	Antenna power supply abnormal
		45	SEL +B current - small
		46	SEL +B current - large
		10	Belt broken
		40	Mechanical failure or cassette broken
		41	EJECT failure
Cassette tape	61H	42	TAPE jamming
		43	Dirty head
		44	Mech power supply abnormal
		10	CD Mech abnormal
		11	CD loading/unloading abnormal
		12	CD lead-in abnormal
		40	No disc loaded
		41	Incorrect disc
		42	Disc unreadable
		43	CD-ROM abnormal
CD	43H 62H 63H	44	CD abnormal
		45	EJECT abnormal
		46	Scratches or non-recorded side
		47	CD high temperature detected
		48	Excessive current detected
		50	Tray IN/OUT abnormal
		51	Elevator abnormal
		52	Clamp abnormal
		10	MD mech abnormal
		11	MD IN/OUT abnormal
MD	64H 65H	12	MD lead-in abnormal
		40	No disc loaded
		41	Incorrect disc
		42	Disc unreadable
		43	MD-ROM abnormal
		44	MD abnormal
		45	EJECT error
		46	Scratches or non-recorded side
		47	MD high temperature detected
		48	Excessive current detected
		50	Tray IN/OUT abnormal
		51	Elevator abnormal
		52	Clamp abnormal

Logical address name	Logical address	Diagnosis code	Diagnosis details
Navigation /GPS	58H 80H	10	Gyroscope abnormal
		11	GPS receiver abnormal
		12	RTC abnormal
		13	SS section abnormal
		14	No Time updating
		15	TCXO abnormal
		16	PLL lock abnormal
		40	GPS antenna abnormal
		41	GPS antenna power supply abnormal
		42	Map disc reading abnormal
	5AH 84H 5BH 83H 82H 9AH	43	SPD signal abnormal
		44	Player abnormal
		45	High temperature abnormal
		41	Antenna power supply abnormal
		45	Radio wave beacon - no antenna connected
		46	Optical beacon - no antenna connected
		47	No FM antenna connected
		4A	FM receiver abnormal
		4B	Radio wave beacon abnormal
		4C	Optical beacon abnormal
	85H	40	Voice control activation SW abnormal
		41	Voice control Microphone abnormal
		40	Multi-CD-CH (optical cable) abnormal
		41	Multi-CD-CH (optical cable) not connected
		42	Multi-CD-CH (CarNet) abnormal
		43	Multi-CD-CH (CarNet) not connected
		50	HIT64 communication not connected
		51	HIT64 communication abnormal
		52	HIT64 BRQ disconnection
		53	HIT64 BRQ short-circuit
	02H	54	HIT64 disconnection
		55	CarNet communication not connected
		56	CarNet communication abnormal
		57	CarNet periodical communication abnormal
Information display/front monitors	32H 34H	10	Video circuit abnormal
		11	Back light abnormal (with no current)
		12	Back light abnormal (with excessive current)
		13	Panel open/close mechanical operation abnormal
		40	Front seat monitor abnormal
		41	Heater abnormal
SW, Audio SW, SW shifting, Command SW	21H 23H 24H 25H	10	Panel SW abnormal
		11	Touch SW failure
		12	SW failure
		13	SW failure
		14	SW failure
		15	SW failure
		16	SW failure
		40	SW failure
		41	SW failure
		41	SW failure
XM tuner	C0H	11	PLL Unlock
		12	CODEC Communication Error
		13	SSDEC Communication Error
		14	SSDEC No Response Error
		15	NVM Error
		16	CAP Error
		40	ANTENNA No Contact
		41	ANTENNA Short

A

B

C

D

E

F

Diagnosis code table

Logical address name	Logical address	Diagnosis code	Diagnosis details
XM	C0H	11	PLL unlocked
		12	CDEC communication error
		13	SSDEC communication error
		14	SSDEC no response
		15	NVM error
		16	CAP error
		40	No antenna connected
		41	Antenna short-circuited
		42	Disc unreadable
		44	DVD abnormal
DVD-CH	45H	45	EJECT abnormal
		46	Scratches or non-recorded side
		47	DVD high temperature detected
		48	Excessive current detected
		50	Tray IN/OUT abnormal
		51	Elevator abnormal

7. GENERAL INFORMATION

7.1 DIAGNOSIS

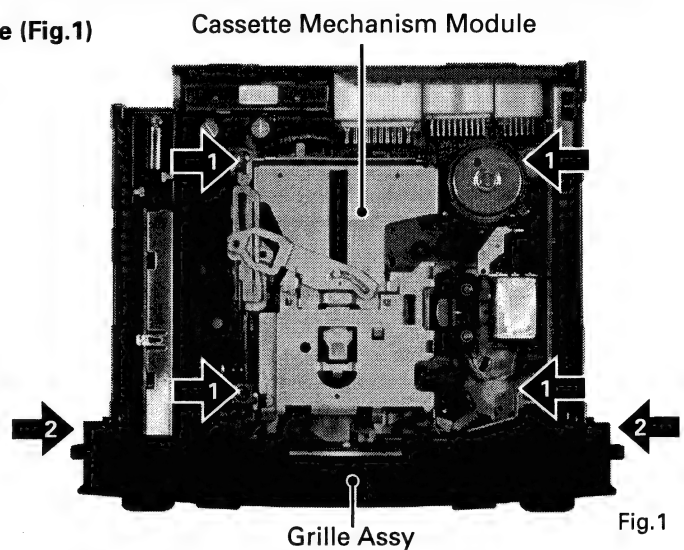
7.1.1 DISASSEMBLY

● Removing the Upper Case (not shown)

1. Remove the Case.

● Removing the Cassette Mechanism Module (Fig.1)

- ➔ 1 Remove the four screws and then remove the Cassette Mechanism Module.

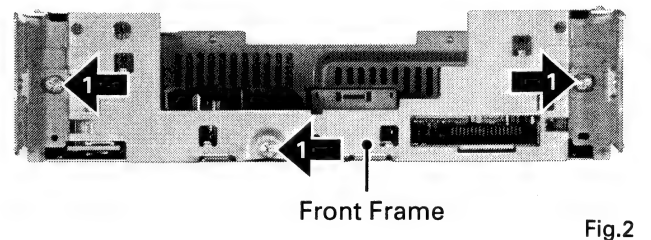


● Removing the Grille Assy (Fig.1)

- ➔ 2 Remove the two screws and then remove the Grille Assy.

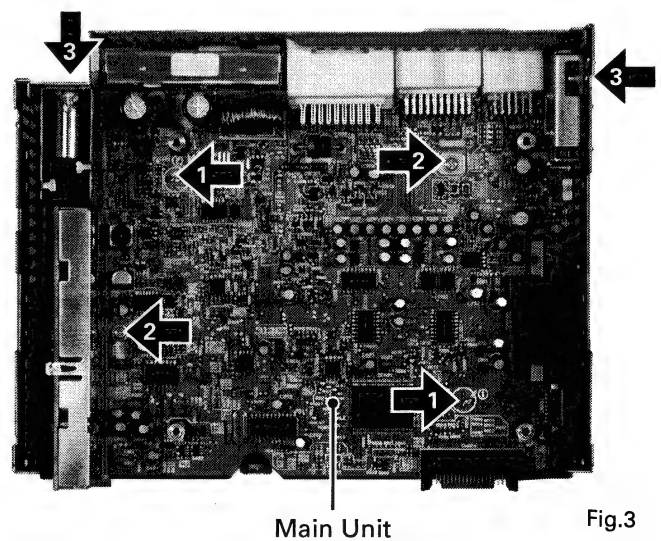
● Removing the Front Frame (Fig.2)

- ➔ 1 Remove the three screws and then remove the Front Frame.

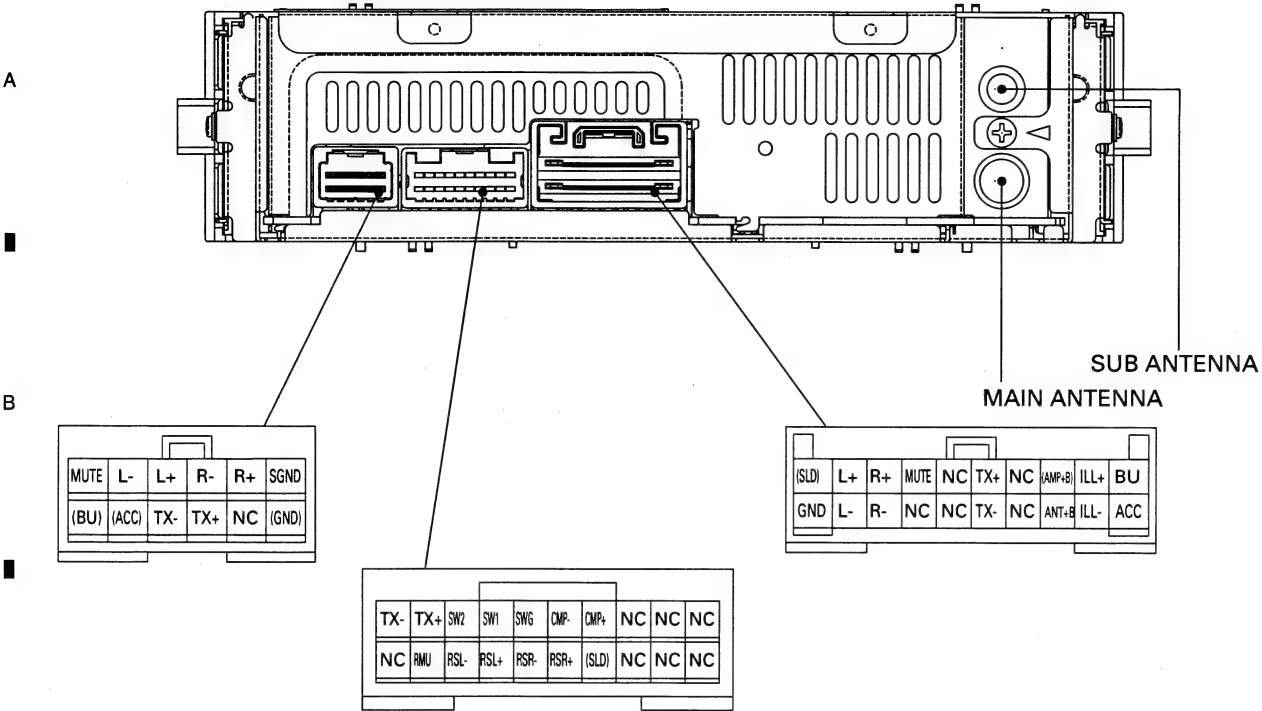


● Removing the Main Unit (Fig.3)

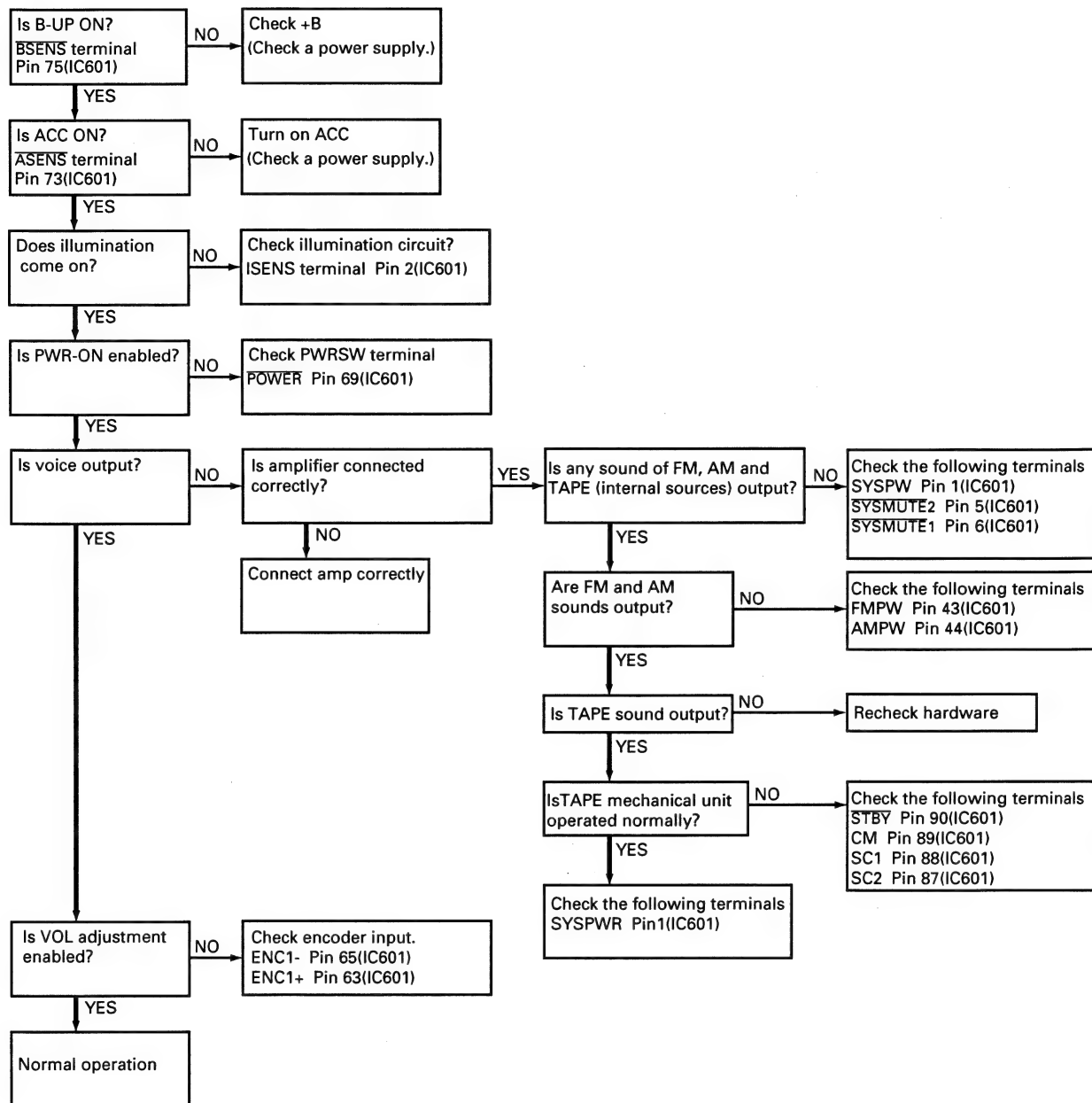
- ➔ 1 Straighten the tabs at two locations indicated.
- ➔ 2 Remove the two screws.
- ➔ 3 Remove the two screws and then remove the Main Unit.



7.1.2 CONNECTOR FUNCTION DESCRIPTION



7.1.3 TROUBLE-SHOOTING



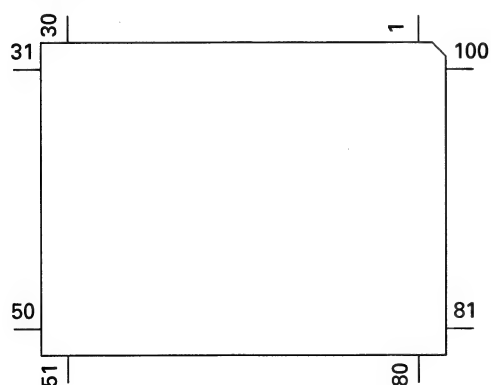
7.2 IC

● Pin Functions(PD5945A)

Pin No.	Pin Name	I/O	Function and Operation
1	SYSPWR	O	Power supply control output
2	ISENS	I	Illumination sense input
3	KISYU	I	Model input
4	LAMP	O	Lamp power supply control(D/A) output
5	SYSMUTE2	O	System mute output for RSE
6	SYSMUTE	O	System mute output
7	RSEMUTE	O	RSE mute output
8	BYTE	I	Vss(Single chip) input
9	CNVSS	I	CNVSS input
10	LANMUTE	O	AVC-LAN mute output
11	SWVDD	O	SWVDD output
12	RESET	I	Reset input
13	XOUT	O	Main clock output
14	VSS	I	GND input
15	XIN	I	Main clock input
16	VCC	I	Power supply(2.7-5.5V) input
17	NMI	I	VDD input
18	RCK	I	RDS data clock input
19	LDET	I	PLL lock signal input
20	NC	O	Not used
21	RX2	I	(BUS)
22	IPPW	O	BUS power supply output
23	SEL2a	O	Selector switch a output for RSE
24	NC	O	Not used
25	SEL2b	O	Selector switch b output for RSE
26	SHIMUKE	I	Model input(L, R)
27	SEL1a	O	Selector switch a output for AMP
28	SEL1b	O	Selector switch b output for AMP
29	RX1	I	(BUS)
30	TX	O	(BUS)
31	PDO	O	PLL data output
32	PDI	I	PLL data input
33	PCK	O	PLL data clock output
34	NC	O	Not used
35	SPDO	O	Sub tuner data output
36	SPDI	I	Sub tuner data input
37	SPCK	O	Sub tuner data clock output
38	SCE	O	Sub tuner chip enable output
39	SCPON	O	Sub tuner power supply control output
40	SSD	I	Sub tuner station ON signal input
41, 42	NC	O	Not used
43	FMPW	O	FM power output
44	AMPW	O	AM power output
45	RDSMUTE	O	RDS mute output
46	DRST	O	RDS decoder IC reset output
47	CURRQ	O	Current request output
48	RDS57K	I	RDS 57kHz ON/OFF input
49	RDT	I	RDS data input
50	RDSLK	I	RDS station ON signal input
51	LOCL	O	Local L output
52, 53	PCE1, 2	O	PLL chip enable 1, 2 output
54	SDBW	I	SD bandwidth ON signal input
55	NL2	I	NL2 ON signal input
56	FMSD	I	FM ON signal input
57	ST	I	Stereo input

Pin No.	Pin Name	I/O	Function and Operation
58	ROMDT	O	ROM correction data output
59	ROMCLK	O	ROM correction clock output
60	ROMCS	O	ROM correction chip select output
61	TEST	I	Test mode input
62	VCC	I	Power supply(2.7-5.5V) input
63	ENC1+	I	VOL encoder input +
64	VSS	I	GND input
65	ENC1-	I	VOL encoder input -
66-68	KST0-2	O	Key strobe output 0-2
69	POWER	I	POWER key input
70-72	KDT0-2	I	Key data input 0-2
73	ASENS	I	ACC sense input
74	CSEJ	I	Tape eject sense input
75	BSENS	I	Back up sense input
76	KDT3	I	Key data input 3
77	ENC2+	I	AUD encoder input +
78	ENC2-	I	AUD encoder input -
79	MS	I	Music sense input
80	F/R	O	Head forward/reverse select output
81	PLAY	O	MS gain select output
82	MTL	I	METAL input
83	NR	O	Dolby B NR ON/OFF output
84	CSLOAD	I	Tape loading detect input
85	POS	I	Position sense input
86	ES	I	Tape end detect input
87, 88	SC2, 1	O	Sub motor control output 2, 1
89	CM	O	Capstan control output
90	STBY	O	Tape stand-by output
91	NL1	I	Noise level input
92	SSL	I	Sub tuner signal level input
93	MSL	I	Main tuner signal level input
94	ILL-	I	Illumination - input
95	STSW2	I	Steering SW 2 input
96	AVSS	I	A/D converter GND input
97	STSW1	I	Steering SW 1 input
98	VREF	I	A/D converter reference voltage input
99	AVCC	I	A/D converter power supply input
100	ANTB	O	Antenna power supply control output

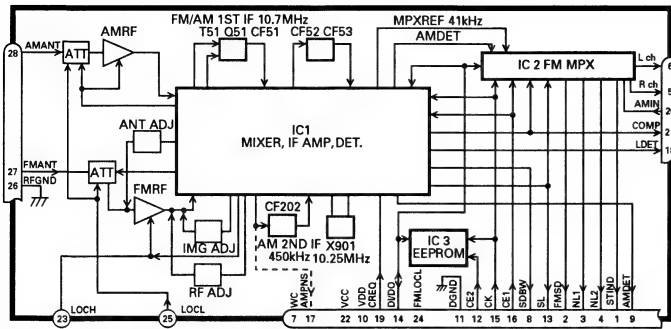
* PD5945A



IC's marked by * are MOS type.

Be careful in handling them because they are very liable to be damaged by electrostatic induction.

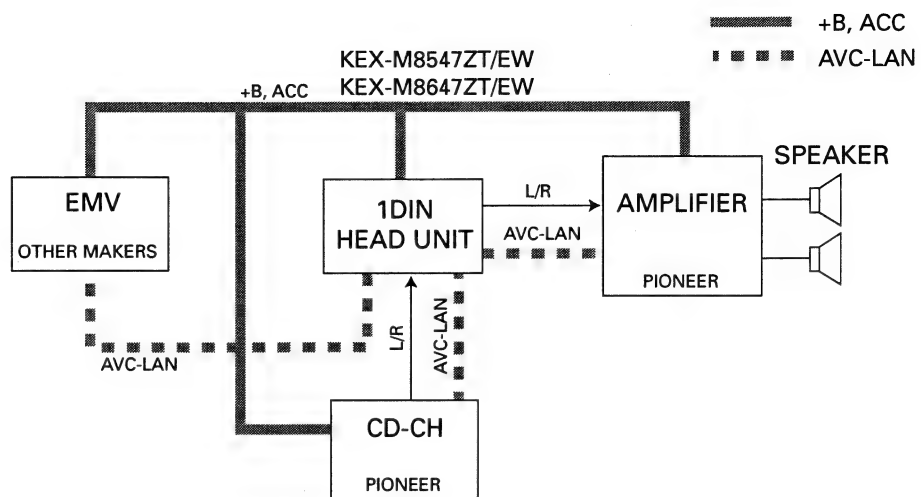
FM/AM Tuner Unit



No.	Symbol	I/O	Explain
1	STIND	O	stereo indicator "Low" when the FM stereo signals are received. To be pulled up to the "VDD" at 47kΩ.
2	FMSD	O	FM station detector "High" when signals are received. To be pulled up to the "VDD" at 47kΩ Meanwhile, 10kΩ should be used when taking diver FIX trigger from here and "High: 0.9VDD or more" and "Low: 250mV or less". (Should satisfy the diver IC specifications)
3	NL1	O	noise level-1 "High" when noise is received. Output for the RDS. GND at 47kΩ//1,800pF.
4	NL2	O	noise level-2 "High" when noise is received. Output for the RDS. GND at 36kΩ//330pF.
5	Rch	O	R channel output FM stereo "R-ch" signal output or AM audio output. Add the specified de-emphasis constant.
6	Lch	O	L channel output FM stereo "L-ch" signal output or AM audio output. Add the specified de-emphasis constant.
7	WC		write control EEPROM write control. Writing permissible at "Low". Normally open.
8	SDBW	O	SD bandwidth SD bandwidth signal output. For detection of detuning data for the RDS.
9	AMDET	O	AM detector output AM detector output. r out < 100Ω
10	VDD		power supply Power supply pin for the digital section. DC 5V +/- 0.25V. Be careful about overlapping noise in the logic section.
11	DGND		digital ground Grounding for the digital section.
12	CE2	I	chip enable-2 EEPROM chip enable. Active a "Low" To be pulled up to the "VDD" at 47kΩ
13	SL	I/O	signal level Received FM/AM signal level (strength) output. Connect the specified load resistor and capacitor (10k Ω+ 39k Ω//4,700pF)
14	DI/DO	I/O	data input/ data output Data input/Data output To be pulled up to the "VDD" at 47kΩ
15	CK	I	clock Clock input To be pulled up to the "VDD" at 47kΩ
16	CE1	I	chip enable-1 AF-RF chip enable. Active at "High" To be grounded at 47kΩ
17	AMPNS	O	AM PNS IF signal IF signal output for AM PNS circuit.
18	LDET	O	lock detector Active at "Low". To be pulled up to the "VDD" at 47kΩ
19	CREQ	I	current request Active at "Low". To be grounded at 47kΩ
20	AMINI		AM audio input The frequency response and the level are set by connecting an external CR network with terminal AMIN as terminal AMDET. r in = 50kΩ
21	COMP	O	composite signal FM composite signal output. r out < 100Ω
22	VCC		power supply Analog section power supply pin.DC 8.4V +/- 0.3V
23	LOCH	I	local high FM local high pin. When seeking local high, apply 5V together with "LOCL".
24	FMLOCL	I	FM local low FM local low pin. When seeking local low, apply 5V to the base of the NPN transistor with which the specified resistor is being connected to the emitter. Keep it open in case of ordinary marketed models.
25	LOCL	I	local low FM/AM local low pin. When seeking local low, apply 5V to the base of the NPN transistor.Since this pin is exclusive for AM when the FMLOCL is in use, do not drive it under FM.
26	RFGND		RF ground Grounding for the antenna section.
27	FMANT	I	FM antenna input FM antenna input. 75Ω. Surge absorber (DSP-201M-S00B) is necessary.
28	AMANT	I	AM antenna input AM antenna input. High impedance. Connect to the antenna through an L (LAU type) of 4.7μH.To cope with the power transmission line hums, insert a series circuit consisting of an L (a coil of about 100mH) + R (a resistor of 470 Ω to 2.2kΩ) between the GND.

7.3 EXPLANATION

7.3.1 SYSTEM BLOCK DIAGRAM



1 2 3 4

7.3.2 OPERATIONAL FLOW CHART

A

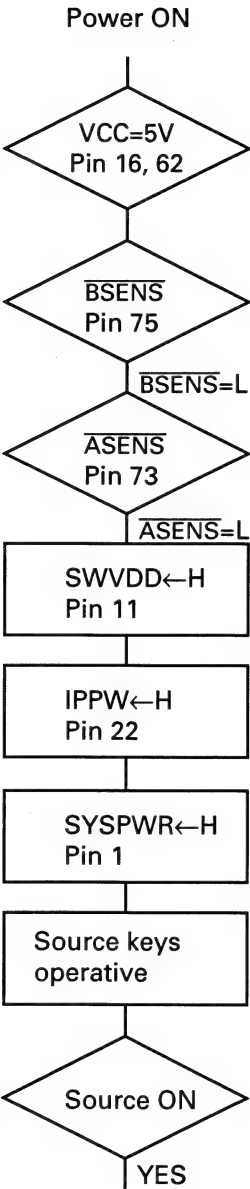
B

C

D

E

F



Completes power-on operation.
(After that, proceed to each source operation)

5

6

7

8

7.4 CLEANING



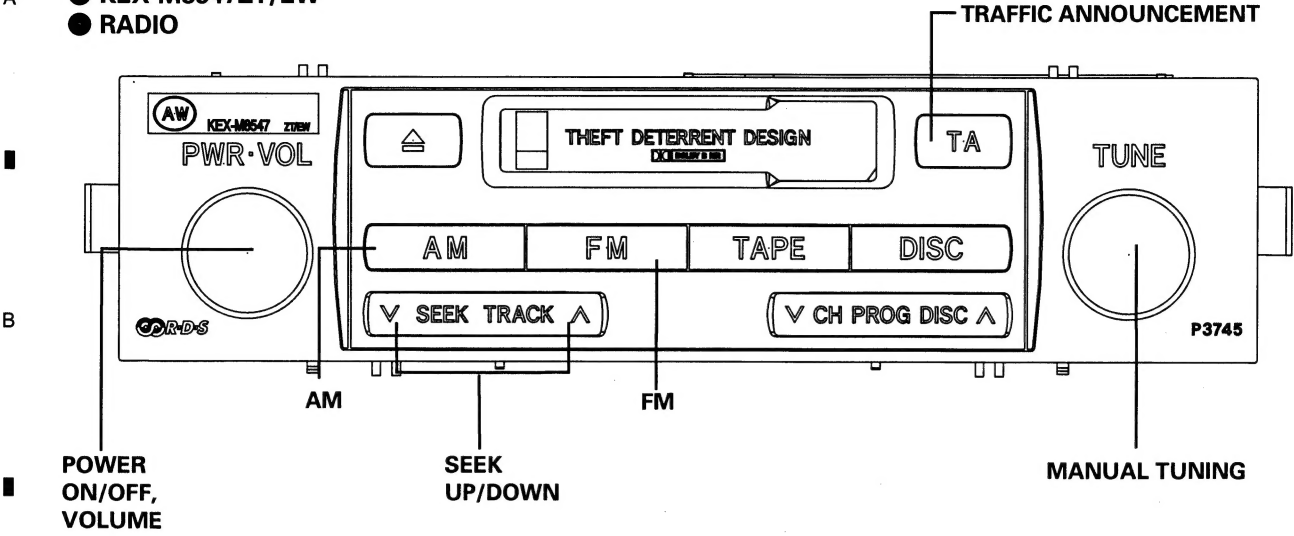
Before shipping out the product, be sure to clean the following portions by using the prescribed cleaning tools:

Portions to be cleaned	Cleaning tools
Cassette heads Pinch rollers Capstans	Cleaning paper : GED-008

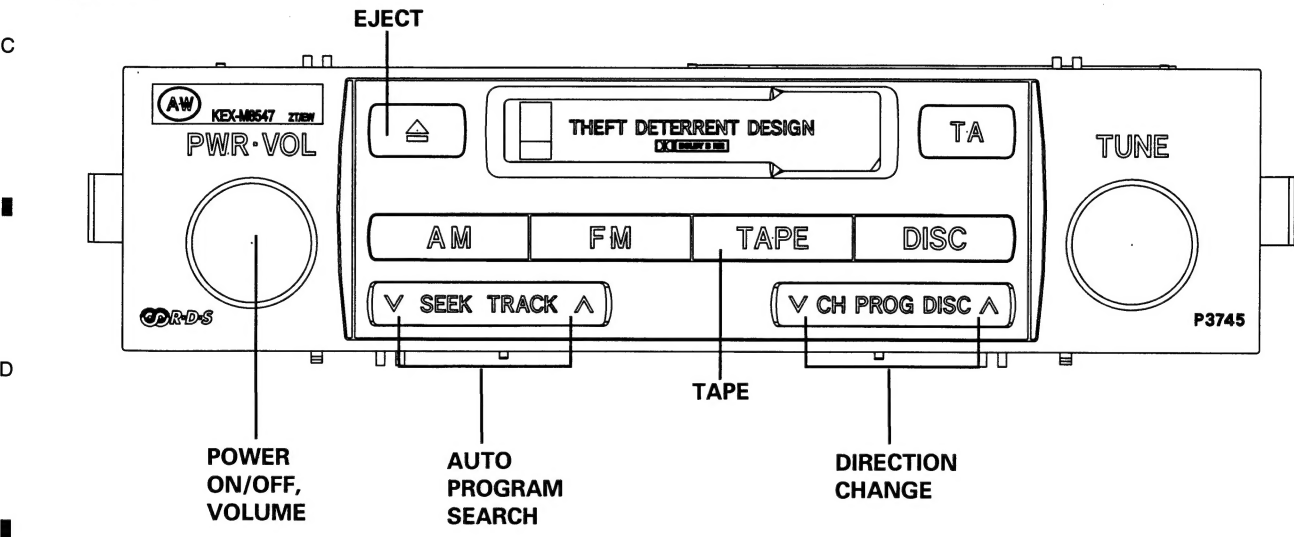
1 2 3 4

8. OPERATIONS

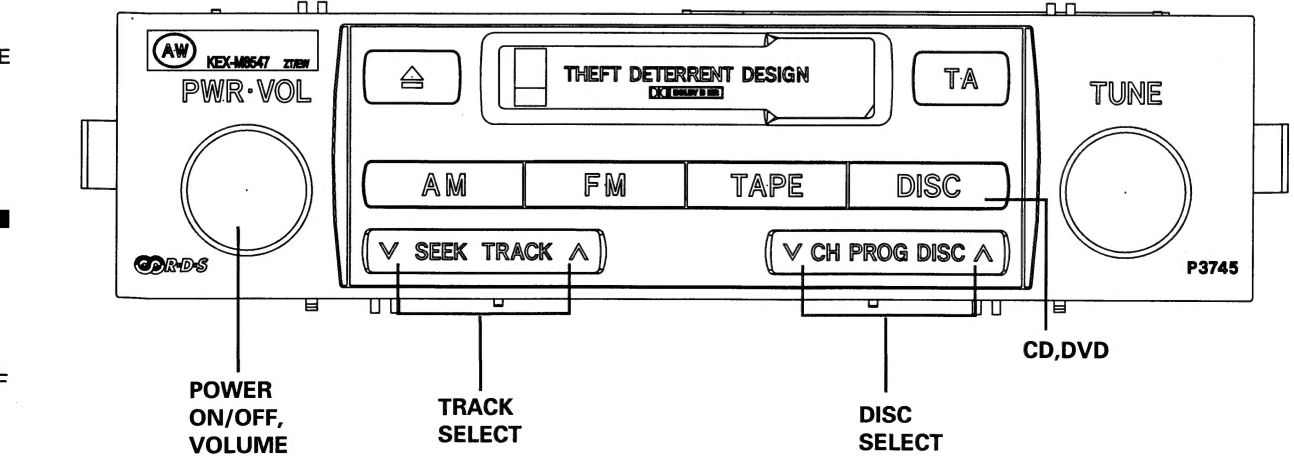
- A ● KEX-M8547ZT/EW
● RADIO



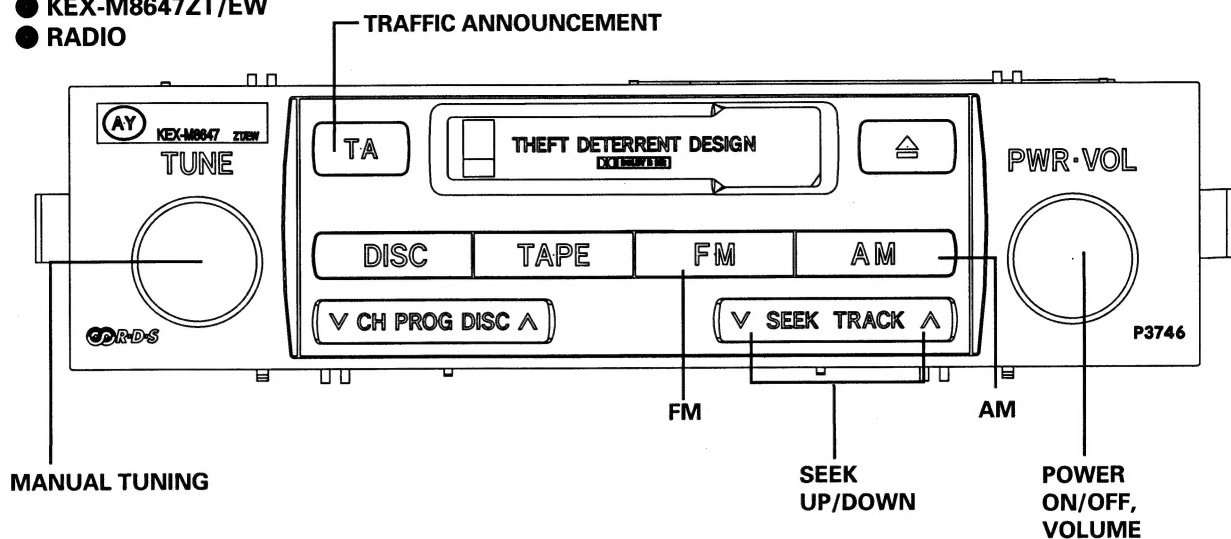
- TAPE



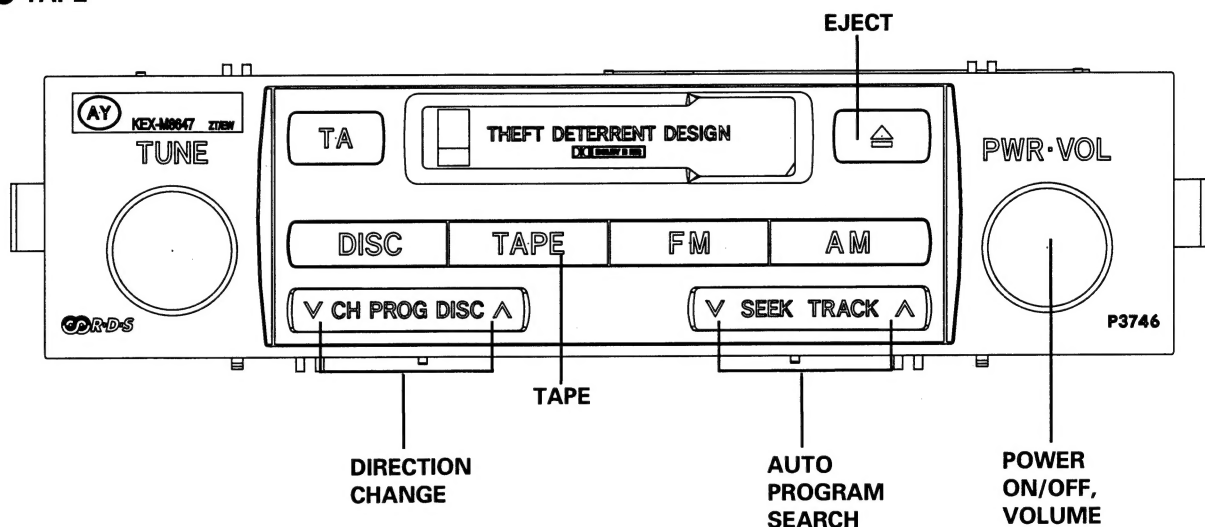
- CD, DVD



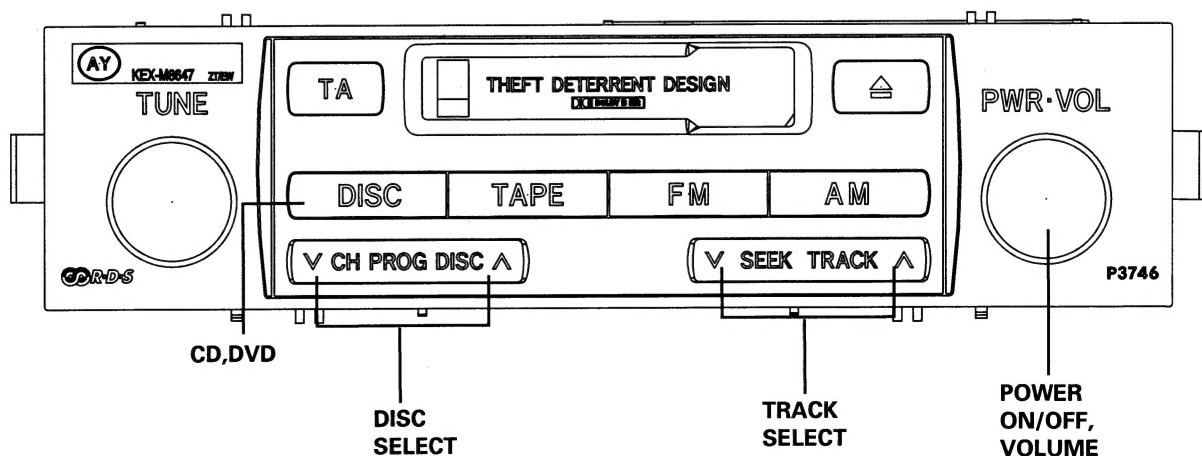
● KEX-M8647ZT/EW
● RADIO



● TAPE



● CD, DVD



● Jigs List

Name	Jig No.	Remarks
Extension cord	GGD1169	Adjustment
Extension cord	GGD1240	Adjustment
Extension cord	GGD1304	Adjustment
Extension cord	GGD1346	Adjustment
Extension cord	GGD1121	Cassette mechanism module adjustment
Test tape	NCT-150	Cassette mechanism module adjustment
Cleaning paper	GED-008	Cleaning cassette heads, pinch rollers and capstans

B

C

D

E

F